



SAN ANTONIO WATER COMPANY

BOARD OF DIRECTORS MEETING

Tuesday, September 21, 2021

5:00 p.m.

In the Upland City Hall Council Chambers
460 N. Euclid Avenue, Upland, CA 91786

The San Antonio Water Company encourages public participation during our Board Meetings. Attendance at meetings is preferred. Recognizing that an adjustment period is appropriate for recently lifted pandemic restrictions and ongoing individual concerns, emails or phoned-in comments are also acceptable.

If you wish to provide comments by phone, please email blee@sawaterco.com at least two hours in advance of the meeting with your phone number and item you wish to comment on. Company staff will call you when the item comes up for discussion and you will be placed on speaker to address the Board.

Public comments regarding upcoming agenda items can be emailed to the Company at blee@sawaterco.com. Comments received by email at least two hours prior to the start of the meeting will be read at the appropriate time during the meeting.

- Call to Order
- Salute to the Flag

1. Recognitions and Presentations:

2. Additions-Deletions to the Agenda:

3. Shareholder-Public Testimony:

This is the time for any shareholder or member of the public to address the board members on any topic under the jurisdiction of the Company, which is on or not on the agenda. Please note, pursuant to the Brown Act the board is prohibited from taking actions on items not listed on the agenda. For any testimony, speakers are requested to keep their comments to no more than four (4) minutes, including the use of any visual aids, and to do so in a focused and orderly manner. Anyone wishing to speak is requested to voluntarily fill out and submit a speaker's form to the manager prior to speaking.

4. Consent Calendar Items:

All items listed hereunder are considered to be routine and there will be no separate discussion of these items unless members of the board request specific items to be removed from the consent calendar for separate action. All items listed or remaining will be voted upon in a single action.

- A. Approval of Board Meeting Minutes
Regular Meeting Minutes of August 17, 2021
- B. Planning, Resources, and Operations Committee (PROC) Meeting Minutes
Meeting minutes of June 22, 2021.
- C. Administration and Finance Committee (AFC) Meeting Minutes
No meeting minutes to report.
- D. Financial Statement
Income Statement and Balance Sheet for July 31, 2021
- E. Investment Activity Report
Monthly Report of Investments Activity.
- F. Water Production and Consumption
Monthly water production and consumption figures.
- G. Prominent Issues Update

Status summaries on certain on-going active issues.

H. **Projects and Operations Update**

Status summaries on projects and operations matters.

I. **Groundwater Level Patterns [Quarterly in January, April, July, and October]**

Tracking patterns of groundwater elevations relative to ground surface.

J. **Conservation Program Update [Quarterly in January, April, July, and October]**

Update on SAWCo's existing water conservation programs

K. **Correspondence of Interest**

5. **Board Committee – Delegate Report:**

A. **PVPA Representative Report**

Verbal report by representative.

B. **Six Basins Representative Report**

Verbal report by representative.

C. **Chino Basin Representative Report**

Verbal report by representative.

D. **Cucamonga Basin Representative Report**

Verbal update by representative.

E. **Administration and Finance Committee (AFC) Chairman's Report**

No meeting to report.

F. **Planning, Resources, and Operations Committee (PROC) Chairman's Report**

Verbal update on meeting held August 24, 2021.

G. **Office Feasibility Study Ad Hoc Committee**

No meeting to report.

6. **Draft Urban Water Management Plan**

At this time the Board of Directors invites the public comments specific to the 2020 draft Urban Water Management Plan prior to adoption. A brief presentation will be provided followed by public comments.

7. **General Manager's Report on Activities**

A. **Positive Pay**

Review bank's recommendation to utilize Positive Pay for bank transactions.

B. **Company Treatment Plant**

Review and discuss recommendation to conduct a budgetary review of a treatment plant.

C. **COVID Response**

Verbal update

8. **Closed Session:**

A. **General Manager's Annual Review, Goals and Objectives [subdivision 9(b) of Section 54957, CGC]**

Discussion and Possible Action regarding General Manager's Performance and Goals

9. **Director's Comments and Future Agenda Items:**

Adjournment:

The next regular Board Meeting will be held on Tuesday, October 19, 2021 at 5:00 p.m.

NOTE: All agenda report items and back-up materials are available for review and/or acquisition by calling the Company Office (909) 982-4107 (139 No. Euclid Avenue, Upland, CA) during regular office hours, Monday through Thursday [7:00 am – 11:30 am & 12:30 pm – 5:00 pm] and alternating Fridays [7:00 am – 11:30 am & 12:30 pm – 4:00 pm] and on the company's website www.sawaterco.com. The agenda is also available for review and copying at the Upland Public Library located at 450 N. Euclid Avenue.

POSTING STATEMENT: On September 16, 2021 a true and correct copy of this agenda was posted at the entry of the Company's Office (139 No. Euclid Avenue), on the public bulletin boards at 450 No. Euclid Avenue (Upland Public Library) and 460 N. Euclid Avenue (Upland City Hall), and on the Company's website.

SAN ANTONIO WATER COMPANY
MINUTES OF THE SAN ANTONIO WATER COMPANY
Tuesday, August 17, 2021

An open meeting of the Board of Directors of the San Antonio Water Company (SAWCo) was called to order at 5:00 p.m. on the above date at the Upland City Hall Council Chambers, 460 North Euclid Avenue, Upland, California. Directors present were Tom Thomas, Will Elliott, Martha Goss, Rudy Zuniga, Bill Velto, and Kati Parker. Also in attendance were, SAWCo's General Manager Brian Lee, Assistant General Manager Teri Layton, and Senior Administrative Specialist Kelly Mitchell. Director Thomas presided.

Director Elliott led all in attendance in the flag salute.

1. Recognitions and Presentations: Mr. Lee advised of two field staff resignations and long-time employee Scott Weiland's plans to retire at the end of 2022. SAWCo will be hiring to fill three Water Utility Worker I positions from its recent job interviews, bringing the total number of field staff to 6 until the end of 2022.

At the previous Board meeting, there was a request for an iPad from one of the Directors. Mr. Lee extended the offer of an iPad to all Directors. He asked interested Directors to email him.

Mr. Lee reminded the Board of the IEUA Regional Plant 5 Tour on Tuesday, September 7th beginning at 8:30 a.m. Staff is organizing a carpool from the office.

The Board member tour of SAWCo facilities is scheduled for the morning of Wednesday, September 8th with Scott Weiland's 45th Employment Anniversary Luncheon directly following.

Mr. Lee stated there are some Directors that have yet to receive SAWCo polo shirts. He asked those interested to please email him with their shirt size request.

2. Additions-Deletions to the Agenda: None.
3. Shareholder-Public Testimony: None.
4. Consent Calendar Items:
 - A. Approval of Board Meeting Minutes
Regular Meeting Minutes of July 20, 2021
 - B. Planning, Resources and Operations Committee (PROC) Meeting Minutes
No meeting minutes to report.
 - C. Administration and Finance committee (AFC) Meeting Minutes
Meeting minutes of May 25, 2021.
 - D. Financial Statement
Income Statement and Balance Sheet for June 30, 2021
 - E. Investment Activity Report
Monthly Report of Investments Activity.
 - F. Water Production and Consumption
Monthly water production and consumption figures.
 - G. Prominent Issues Update
Status summaries on certain on-going active issues.
 - H. Projects and Operations Update
Status summaries on projects and operations matters.
 - I. Groundwater Level patterns [Quarterly in January, April, July, and October]
Tracking patterns of groundwater elevations relative to ground surface.
 - J. Conservation Program Update [Quarterly in January, April, July, and October]
Update on SAWCo's existing water conservation programs
 - K. Correspondence of Interest

Director Elliott moved and Director Velto seconded to approve the Consent Calendar as presented. Motion carried unanimously with Director Cable absent.

5. Board Committee – Delegate Report:

A. Pomona Valley Protective Association (PVPA) Representative’s Report – Director Thomas reported on the PVPA meeting held the previous week. Again this month, there is practically no water being spread. After describing the locations of PVPA property, Director Thomas advised weed abatement is taken care of by the City of Pomona at this time every year.

PVPA continues to monitor the National Recreation Area bill as their privately owned land has been included. The bill is currently at a standstill.

PVPA land that Holliday Rock mines has had a significant increase in property taxes. Holliday Rock has advised they are okay with paying the additional amount.

A weed abatement notice was received for PVPA land that has never been abated. It is an area of habitat and PVPA is currently in the middle of a Programmatic Environmental Impact Report. They are in talks with the county about whether they should be abating this area that is native shrub.

The Budget Committee meeting will take place in September.

B. Six Basins Representative Report – Ms. Layton stated the Watermaster Board agreed to prepare a work plan to characterize high ground water conditions in the two basins. This was part of the strategic planning. Since experience does not warrant this effort, the consultant was directed to discontinue if research continues to support the experience of the various water entities.

The Board met in closed session to review the two proposals received for legal counsel representation for Six Basins Watermaster as the current legal counsel is retiring. After discussion, it was reported in open session that the Board decided to hire Richards, Watson, & Gurshon.

The next scheduled Six Basins meeting will take place on August 25th.

C. Chino Basin Representative Report – Mr. Lee reported the Appropriative Pool (AP) continues to work with the Agricultural Pool (Ag) to reach a settlement agreement after the judge ruled in favor of the AP. The Ag Pool filed a lawsuit against the AP attempting to recover nearly \$500,000 worth of legal fees. The court date is scheduled for October 9th. In the meantime, the two Pools continue to try to work towards an agreement. The AP has received redacted legal invoices from Ag which do not provide enough information. A letter requesting additional information on the invoices will be sent.

D. Cucamonga Basin Representative Report – Ms. Layton stated the working group met virtually on August 3rd. The Term of Reference document is still awaiting signature from Cucamonga Valley Water District’s (CVWD) general manager.

The Request for Proposal (RFP) was discussed and minor changes are anticipated.

It was announced by CVWD that West Yost Associates will charge \$18,000 to obtain the prior model for the basin. CVWD was going to attempt to negotiate with West Yost Associates. The desire is to have the new consultant review the model for accuracy.

Discussion took place about a possible development near the Sycamore Inn. The measuring device described in the judgment is believed to be involved. A copy of the technical memo performed by West Yost Associates was requested and received.

The next scheduled meeting is September 7th.

- E. **Administration and Finance Committee (AFC) Chairman's Report** – Director Thomas advised items discussed at the most recent AFC meeting are included in the General Manager's Report on Activities.
- F. **Planning, Resources, and Operations Committee (PROC) Chairman's Report** – No meeting to report.
- G. **Office Feasibility Study Ad Hoc Committee** – No meeting to report.

6. General Manager's Report on Activities:

- A. **Water Stock Transfer Policy** – Mr. Lee advised staff had updated information on San Antonio Water Company stock certificates to include the requirement of notarized signatures. However, approved policy did not identify this long-practiced requirement.

Mr. Lee recommended the Board ratify and approve the revised water stock transfer policy to include notarized signature(s) requirement.

Director Velto moved and Director Elliott seconded to ratify and approve the revised water stock transfer policy to include notarized signature(s) requirement. Motion carried unanimously with Director Cable absent.

- B. **Update to Records Retention Guide** – Mr. Lee explained this is a review of SAWCo's Records Retention Guide with the intent of updating and modernizing. Staff focused on digital records and the attempt to go more paperless.

Mr. Lee recommended the Board agree with the AFC's recommendation to approve the changes and updates to the records retention guide as presented.

Director Velto moved and Director Goss seconded to approve the changes and updates to the records retention guide as presented. Motion carried unanimously with Director Cable absent.

- C. **Update to Records Management Policy** – Mr. Lee clarified this item is to update the entire Records Management Policy as opposed to the previous agenda item which updated just the records retention guide.

Mr. Lee recommended the Board agree with the AFC's recommendation to approve the changes and updates to the records management policy as presented.

Director Velto moved and Director Parker seconded to approve the changes and updates to the records management policy as presented. Motion carried unanimously with Director Cable absent.

- D. **Employee Scott Weiland's 45th Employment Anniversary** – Mr. Lee explained SAWCo policy does not give specifics for the recognition of employees beyond their 30th work anniversary but instead leaves it for the Board to decide. Staff put together a recommendation and presented it to the AFC.

The recommendation from staff is to acknowledge Mr. Weiland by providing an extra \$450 in his paycheck, a day off coupon, luncheon, and other form of acknowledgement not to exceed \$825 in gifts.

Director Elliott moved and Director Goss seconded to approve the acknowledgment of Scott Weiland's 45th Employment Anniversary with SAWCo by providing him an extra \$450 in his paycheck, a day off coupon, luncheon, and other form of acknowledgement not to exceed \$825 in gifts. Motion carried unanimously with Director Cable absent.

E. General Manager's Goals and Objectives – Mr. Lee provided the list of agreed upon 2020 Goals and Objectives for his position as well as proposed Goals and Objectives for 2021. He then reviewed each goal and objective for 2020 and advised of his progress. Previously, each Director provided comments individually regarding the Goals and Objectives for the General Manager and those comments were aggregated into one document for review and finalizing.

There was consensus that each Director would provide comments to be aggregated into one document for final review. A closed session will be scheduled for September's Board Meeting for the General Manager's personnel review.

F. COVID Response – Mr. Lee reported at this time, San Bernardino County has not implemented any new mandates.

Director Thomas inquired whether visitors must wear a mask when at the company office. Mr. Lee advised there is no such policy in the office. Director Thomas questioned whether SAWCo could post a sign much like that at the local grocery stores that advise if you are unvaccinated you must wear a mask to enter the building. Mr. Lee agreed to post a sign with said information.

7. Closed Session:

Personnel Investigation [subdivision 9(b) of Section 54957, CGC]

The Board, Mr. Lee, and Ms. Layton exited the meeting into closed session at 5:35 p.m.

All parties returned from closed session at 6:00 p.m.

8. Director's Comments and Future Agenda Items: Director Thomas announced the closed session was informational only; no action was taken.

The next Board meeting is scheduled for Tuesday, September 21st at 5 p.m.

Adjournment:

With no further business to discuss the meeting was adjourned at 6:01 p.m.

Assistant Secretary
Brian Lee

MINUTES OF THE SAN ANTONIO WATER COMPANY
PLANNING, RESOURCES, and OPERATIONS COMMITTEE
June 22, 2021

An open meeting of the Planning, Resources, and Operations Committee (PROC) of the San Antonio Water Company (SAWCo) was called to order virtually at 3:00 p.m. on the above date. Committee members present were Will Elliott, Rudy Zuniga, and Tom Thomas. Also in attendance were, City of Upland Utility Manager David Commons, and SAWCo's General Manager Brian Lee, Assistant General Manager Teri Layton, and Senior Administrative Specialist Kelly Mitchell. Director Elliott presided.

1. Recognitions and Presentations – None.
2. Additions-Deletions to the Agenda – None.
3. Public Comments – None.
4. Approval of Committee Meeting Minutes:
 - A. ***Regular Committee Minutes of April 27, 2021*** – Director Thomas moved, and Director Zuniga seconded to approve the meeting minutes of April 27, 2021 as presented. Motion carried unanimously.
5. Planning and Operational Issues:
6. Planning and Operational Updates -
 - A. ***Project Status Report/Project List***
 - Holly Drive Reservoir – The generator has been delivered. A gas line connection and concrete pad will need to be completed prior to generator install.
 - AMR – All domestic meters have been installed. Staff is working on rolling out private digital access to their meter for each shareholder starting in the summer.
 - Cucamonga Crosswalls Mitigation – staff is contacting the environmental contractor to conduct assessment and site clean-up.
 - Reservoir 9 Pipeline – Final paving occurred on May 12th with final slurry seal scheduled for June 24th.
 - Well 19 – staff is working on a Request for Proposals to construct a new well. RFP should be released next year for consideration by the Board.
 - Shaft 6 Generator – waiting on delivery.
 - Booster 17 (V-screen) Generator – waiting on delivery.
 - Urban Water Management Plan – staff and consultant are exchanging and reviewing data.
 - American Water Infrastructure Act Risk and Resiliency Assessment – staff and consultant are exchanging and reviewing data. Assessment will be certified by end of June.
 - Risk and Resiliency Assessment of SCADA system – a detailed study to find and eliminate openings in the SCADA system to reduce risk of outside attack has been contracted.

- Demolition of abandoned booster stations 5 and 15 – CP Construction was awarded the contract in May. The City of Upland has tentatively agreed to waive permit fees in exchange for quitclaim of park land.

B. Alarm Upgrade and Proposals – Mr. Lee informed the Committee that there are currently two different alarm company’s monitoring SAWCo’s facilities, office and yard buildings. Due to aging technology, Baker systems would like to upgrade the panel at one of the facilities it monitors for SAWCo. Before approving the \$1,200 upgrade cost, staff conducted research on alarm companies to address issues currently affecting both alarm systems. Some of the issues experienced include lack of prior notification for system changes that result in invoices for work performed and consistent false alarms. Staff believes it wise to incorporate one company for all alarm monitoring and would also like to add an alarm to an additional facility. As such, staff solicited bids from four known monitoring and alarm companies; Mijac, Baker, Bay Alarm, and ADT. Baker did not provide a proposal.

Staff provided a breakdown of the cost of installation, yearly monitoring plus yearly monitoring over a seven-year period and the average yearly cost over seven years for each alarm company proposal. Based on the technology, features provided and cost, staff recommended utilizing ADT.

The Committee, being familiar with local company Mijac, recommended staff gather more information from each alarm company that provided proposals and bring the item to the full Board for discussion and possible action.

C. Paloma Hydraulic Break – Mr. Lee explained the facilities at the Paloma Hydraulic Break cannot be abandoned and the sounds coming from it cannot be fully eliminated.

Director Elliott requested staff obtain costs on what SAWCo can reasonably do to reduce the noise at this location.

Director Thomas asked staff to inquire with the City of Upland about removing the building on site. Director Elliott recommended SAWCo get their plan together for reducing the noise at the location and then involve the City of Upland regarding options for the building.

There was consensus on the Committee to have staff obtain the costs for reducing the noise at this location and bring the item back to the Committee for discussion and possible action.

7. Basin Issues and Updates

- ***San Antonio Canyon Watershed*** – Mr. Lee stated there is decent water flow but not enough for the City of Upland to run their treatment plant. Ms. Layton advised of the continued work on the Watershed Sanitary Survey and the possibility of an October 2nd Water Shed Clean Up Day. The next meeting is scheduled for July 14th.

June 22, 2021

- ***Chino Basin*** – Mr. Lee stated there is no update on this item since the recent Board meeting.
- ***Six Basins*** – Ms. Layton advised of the efforts in the search to replace retiring legal counsel. The next meeting is scheduled for the following day.
- ***Cucamonga Basin*** – Ms. Layton stated there is no update on this item since the recent Board meeting.

8. Closed session: None.

9. Committee's Comments and Future Agenda Items: None.

Adjournment: –The meeting adjourned at 3:39 p.m.

Assistant Secretary
Brian Lee



San Antonio Water Company, CA

Item 4D Income Statement Group Summary

For Fiscal: 2021 Period Ending: 07/31/2021

IncomeStatement	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Category: 4 - Income					
SubCategory: 40 - Shareholder Revenue					
1185 - Domestic Water Income (Base)	301,000.00	301,000.00	75.17	115,645.51	185,354.49
1215 - Domestic Water Income (Supplemental)	148,000.00	148,000.00	53.65	108,393.63	39,606.37
1220 - Domestic Water Income (Tier 3)	104,000.00	104,000.00	-2,063.99	154,147.85	-50,147.85
1230 - Domestic Water Income (Readi/Chrg)	200,000.00	200,000.00	49.66	100,669.40	99,330.60
1235 - Domestic Water Availability Charge (WAC)	60,000.00	60,000.00	13.94	30,610.49	29,389.51
1245 - Municipal Water Income (Base)	3,100,000.00	3,100,000.00	284,375.18	1,603,784.37	1,496,215.63
1268 - Municipal Water Income (Readi/Chrg)	80,000.00	80,000.00	6,400.00	45,300.00	34,700.00
1274 - Misc Water Income (Base)	220,000.00	220,000.00	28,361.24	114,038.13	105,961.87
1275 - Misc Water Income (Supplemental)	126,000.00	126,000.00	395.00	4,020.70	121,979.30
1276 - Munnicipal Water Availability Charge (WAC)	477,000.00	477,000.00	39,756.00	278,188.00	198,812.00
1280 - Misc Water Income (Tier 3)	15,000.00	15,000.00	0.00	47.85	14,952.15
1288 - Misc Water Income (Readi/Chrg)	23,000.00	23,000.00	2,050.00	13,610.00	9,390.00
1290 - Misc Water Availability Charge (WAC)	24,000.00	24,000.00	1,922.00	13,454.00	10,546.00
1295 - Dormant Water Availability Charge (WAC)	54,000.00	54,000.00	0.00	26,096.33	27,903.67
1300 - Sale of Water/From Storage	0.00	0.00	0.00	180,000.00	-180,000.00
1400 - Stock Transfer	5,000.00	5,000.00	420.00	3,030.00	1,970.00
1410 - Late/Re-establishment Fee	4,000.00	4,000.00	145.00	450.00	3,550.00
1420 - Return Check Fee	0.00	0.00	0.00	25.00	-25.00
1430 - Stock Certificate Storage and Handling Fee	0.00	0.00	0.00	120.00	-120.00
SubCategory: 40 - Shareholder Revenue Total:	4,941,000.00	4,941,000.00	361,952.85	2,791,631.26	2,149,368.74
SubCategory: 42 - Non-Shareholder Revenue					
1725 - Misc. Income	2,000.00	2,000.00	0.66	6,269.61	-4,269.61
1750 - Service/Litigation Agreements	0.00	0.00	72.15	446.01	-446.01
1753 - Ground Lease Income	54,000.00	54,000.00	5,907.84	39,362.88	14,637.12
1755 - Interest Earned	90,000.00	90,000.00	3,298.12	13,446.95	76,553.05
1785 - Gain on Sale of Asset	344,000.00	344,000.00	0.00	0.00	344,000.00
SubCategory: 42 - Non-Shareholder Revenue Total:	490,000.00	490,000.00	9,278.77	59,525.45	430,474.55
Category: 4 - Income Total:	5,431,000.00	5,431,000.00	371,231.62	2,851,156.71	2,579,843.29
Category: 5 - O & M Expense					
SubCategory: 50 - Operating Facilities					
2175 - Facility Related Field Labor	225,000.00	225,000.00	13,211.60	124,082.87	100,917.13
2235 - Repairs to Facilities and Equipment	300,000.00	300,000.00	14,860.54	173,846.90	126,153.10
2265 - Power-Gas & Electric (utilities)	600,000.00	600,000.00	116,641.86	378,841.05	221,158.95
SubCategory: 50 - Operating Facilities Total:	1,125,000.00	1,125,000.00	144,714.00	676,770.82	448,229.18
SubCategory: 51 - Operating Activities					
2475 - Customer Service	85,000.00	85,000.00	5,541.60	52,760.59	32,239.41
2498 - Conservation	20,000.00	20,000.00	0.00	8,870.00	11,130.00
SubCategory: 51 - Operating Activities Total:	105,000.00	105,000.00	5,541.60	61,630.59	43,369.41
SubCategory: 52 - Other Operating Expense					
2205 - Non-Facility Related Labor	75,000.00	75,000.00	4,539.55	32,716.88	42,283.12
2210 - O & M - All Other	3,800.00	3,800.00	699.50	5,229.63	-1,429.63
2295 - Supplies (Inventory & Tools Expense)	10,000.00	10,000.00	0.00	6,165.54	3,834.46
2565 - Depreciation/Amortization	903,000.00	903,000.00	77,640.18	545,235.46	357,764.54
2715 - Property Taxes	220,000.00	220,000.00	0.00	103,791.47	116,208.53
2805 - Water Resource Mgmt.	200,000.00	200,000.00	1,711.40	33,966.28	166,033.72
SubCategory: 52 - Other Operating Expense Total:	1,411,800.00	1,411,800.00	84,590.63	727,105.26	684,694.74
Category: 5 - O & M Expense Total:	2,641,800.00	2,641,800.00	234,846.23	1,465,506.67	1,176,293.33

Income Statement

For Fiscal: 2021 Period Ending: 07/31/2021

IncomeStatement	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Category: 6 - G & A Expense					
SubCategory: 60 - Personnel					
2115 - Administrative Services	290,000.00	290,000.00	18,972.41	162,587.45	127,412.55
2130 - Development/Water Svc. App.	1,000.00	1,000.00	0.00	0.00	1,000.00
2325 - Payroll Taxes	80,000.00	80,000.00	5,609.36	45,322.51	34,677.49
2355 - Worker's Compensation Insurance	15,000.00	15,000.00	3,502.00	7,986.00	7,014.00
2385 - Benefit Pay (Vac., sick, etc.)	185,000.00	185,000.00	16,522.83	91,445.92	93,554.08
2415 - Benefit Insurance (Pension,Life,Medical,Vision etc)	250,000.00	250,000.00	19,304.99	143,066.51	106,933.49
2430 - Benefit Administrative Services	3,000.00	3,000.00	0.00	1,000.00	2,000.00
SubCategory: 60 - Personnel Total:	824,000.00	824,000.00	63,911.59	451,408.39	372,591.61
SubCategory: 61 - Other					
2445 - Office/IT Support	63,000.00	63,000.00	3,529.01	24,616.01	38,383.99
2505 - Directors Fees & Expense	34,000.00	34,000.00	2,116.57	20,327.28	13,672.72
2535 - Liability Insurance	30,000.00	30,000.00	0.00	35,510.00	-5,510.00
2595 - Communication	40,000.00	40,000.00	1,606.60	28,746.50	11,253.50
2625 - Dues & Publications	3,000.00	3,000.00	100.00	1,377.95	1,622.05
2655 - Outside Services	30,000.00	30,000.00	217.31	10,848.62	19,151.38
2745 - Income Tax Expense	14,000.00	14,000.00	0.00	11,856.00	2,144.00
2775 - Accounting	70,000.00	70,000.00	3,771.99	49,890.80	20,109.20
2776 - Legal	250,000.00	250,000.00	8,190.00	123,749.26	126,250.74
2790 - Human Resources Expense	45,000.00	45,000.00	7,755.60	29,404.38	15,595.62
2865 - All other	35,000.00	35,000.00	852.53	7,392.40	27,607.60
SubCategory: 61 - Other Total:	614,000.00	614,000.00	28,139.61	343,719.20	270,280.80
Category: 6 - G & A Expense Total:	1,438,000.00	1,438,000.00	92,051.20	795,127.59	642,872.41
Total Surplus (Deficit):	1,351,200.00	1,351,200.00	44,334.19	590,522.45	

Fund Summary

Fund	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
10 - 10	1,351,200.00	1,351,200.00	44,334.19	590,522.45	760,677.55
Total Surplus (Deficit):	1,351,200.00	1,351,200.00	44,334.19	590,522.45	



Account	Name	Balance
Fund: 10 - 10		
Assets		
BalSubCategory: 10 - Cash		
10-00-00-10100-00000	Petty Cash	250.00
10-00-00-10201-00000	Checking Account-8431	2,094,507.73
10-00-00-10400-00000	Savings-CD Accounts	20,000.00
10-00-00-10415-00000	D&O Checking Account	748,648.88
10-00-00-10438-00000	Depre/Obsolescene Res (LAIF)	3,406,732.26
	Total BalSubCategory 10 - Cash:	6,270,138.87
BalSubCategory: 11 - Accounts Receivable		
10-00-00-11100-00000	Accounts Receivable-Domestic	40,548.18
10-00-00-11200-00000	Accounts Receivable-Municipal	330,531.18
10-00-00-11250-00000	Accounts Receivable-Misc.	32,601.48
10-00-00-11260-00000	Accounts Receivable - Dormant	999.71
10-00-00-11275-00000	Contra Accounts Receivable - Unapplic	-19,722.07
10-00-00-11300-00000	Accounts Receivable-Other	215,790.98
10-00-00-11301-00000	Note Receivable	1,032,000.00
	Total BalSubCategory 11 - Accounts Receivable:	1,632,749.46
BalSubCategory: 12 - Inventory		
10-00-00-12100-00000	Inventories-Materials & Supply	92,960.65
	Total BalSubCategory 12 - Inventory:	92,960.65
BalSubCategory: 13 - Prepaid		
10-00-00-13100-00000	Prepaid Insurance	8,868.75
10-00-00-13105-00000	PREPAID POSTAGE	369.00
10-00-00-13200-00000	Prepaid State Franchise Tax	144.00
	Total BalSubCategory 13 - Prepaid:	9,381.75
BalSubCategory: 14 - Investments		
10-00-00-14150-00000	P.V.P.A. Investment	1.00
10-00-00-14151-00000	457B Plan Investment	41,500.23
	Total BalSubCategory 14 - Investments:	41,501.23
BalSubCategory: 15 - Property, Plant, & Equipment		
10-00-00-15100-00000	Land & Water Rights	920,161.26
10-00-00-15110-1507J	Work in Progress "Proj J"	72,466.00
10-00-00-15110-1602U	Work in Progress	1,114,454.79
10-00-00-15110-1901	Work In Progress	807,390.59
10-00-00-15110-2001	Work In Progress	1,153,767.94
10-00-00-15110-2002	Work In Progress	129,428.57
10-00-00-15110-2003	Work In Progress	640,440.69
10-00-00-15110-2004	Work In Progress	51,828.34
10-00-00-15110-2101	Work In Progress	54.21
10-00-00-15110-2103	Work In Progress	95,677.66
10-00-00-15110-2104	Work In Progress	9,520.00
10-00-00-15110-2108	Work In Progress	50,000.00
10-00-00-15110-2109	Work In Progress	11,232.00
10-00-00-15110-2110	Work In Progress	95.17
10-00-00-15150-00000	Buildings & Site Improvements	1,746,624.52
10-00-00-15200-00000	Wells-Shafts, Bldgs, & Equip	4,887,026.90
10-00-00-15250-00000	Boosters-Bldgs & Equip	2,448,690.30
10-00-00-15300-00000	Reservoirs	3,081,787.33
10-00-00-15350-00000	Tunnels, Forebay, & Ponds	1,587,111.19
10-00-00-15400-00000	Spreading Works-Cucamonga Wash	54,859.53
10-00-00-15410-00000	Spreading Works-SanAntonio Wash	50,235.18
10-00-00-15450-00000	Pipelines	16,441,208.14

Balance Sheet

As Of 07/31/2021

Account	Name	Balance	
10-00-00-15500-00000	Autos & Equipment	513,205.56	
10-00-00-15550-00000	Tools	106,751.11	
10-00-00-15600-00000	Telemetry System	600,886.90	
10-00-00-15650-00000	Office Equipment	523,769.10	
10-00-00-15990-00000	Accumulated Depreciation	-13,990,156.03	
Total BalSubCategory 15 - Property, Plant, & Equipment:		23,108,516.95	
BalSubCategory: 16 - Other Assets			
10-00-00-16100-00000	Documents & Studies	906,358.61	
10-00-00-16100-1905	WIP- Master Plan and Asset Managemen	102,930.22	
10-00-00-16100-2105	WIP-2020 URBAN WATER MANAGEME	12,453.52	
10-00-00-16100-2106	WIP- WATER INFRASTRUCTURE ACT	24,527.49	
10-00-00-16990-00000	Accumulated Amortization	-709,483.36	
Total BalSubCategory 16 - Other Assets:		336,786.48	
Total Assets:		31,492,035.39	<u>31,492,035.39</u>
Liability			
BalSubCategory: 13 - Prepaid			
10-00-00-20650-00000	Deferred Revenue Deposit	20,016.00	
Total BalSubCategory 13 - Prepaid:		20,016.00	
BalSubCategory: 20 - Short-term less than 1 year			
10-00-00-20100-00000	Trade Accounts Payable	150,352.62	
10-00-00-20115-00000	D&O Trade Accounts Payable	213,466.04	
10-00-00-20261-00000	Section 125 - Dental	-51.31	
10-00-00-20262-00000	Section 125 - Vision	-8.53	
10-00-00-20600-00000	Water Hydrant Meter Deposit	850.00	
10-00-GN-20820-00000	Accrued Vacation Payable	20,404.60	
10-00-OP-20820-00000	Accrued Vacation Payable	24,818.57	
Total BalSubCategory 20 - Short-term less than 1 year:		409,831.99	
BalSubCategory: 21 - Long-term more than 1 year			
10-00-00-20152-00000	457B Deferred Comp Liability	41,500.23	
10-00-00-21500-00000	Unclaimed Credits	614,939.12	
10-00-00-22100-00000	Deferred Gain	1,029,178.33	
Total BalSubCategory 21 - Long-term more than 1 year:		1,685,617.68	
Total Liability:		2,115,465.67	
Equity			
BalSubCategory: 30 - Stockholder equity			
10-00-00-30200-00000	Contributed Capital - Ext. Fee	447,258.02	
10-00-00-30210-00000	Contr. Property, Plant & Equip	2,432,256.77	
10-00-00-30300-00000	Capital Account	1,500,000.00	
10-00-00-30310-00000	Unissued Capital Stock	-861,100.00	
10-00-00-30400-00000	Retained Earngs-Brd Designated	5,436,069.53	
10-00-00-30410-00000	Retained Earnings-Unrestricted	19,831,562.95	
Total BalSubCategory 30 - Stockholder equity:		28,786,047.27	
Total Beginning Equity:		28,786,047.27	
Total Revenue		2,851,156.71	
Total Expense		2,260,634.26	
Revenues Over/Under Expenses		590,522.45	
Total Equity and Current Surplus (Deficit):		29,376,569.72	
Total Liabilities, Equity and Current Surplus (Deficit):		31,492,035.39	<u>31,492,035.39</u>

Monthly Investment Activity Summary - Compiled from Banking Statements for Correlation with Monthly Financials

Institution	Type of Investment	Date of Maturity	Rate of Interest	Account Balance as of 7/31/2021	Reserves		
					Operating	Depreciation & Obsolescence	Modernization
Citizens Business Bank (CBB)	*Checking	N/A	No Interest	2,094,507.73	2,094,507.73		
Citizens Business Bank (CBB)	*D&O Checking	N/A	No Interest	748,648.88		\$ 748,648.88	
Citizens Business Bank	Pref. Money Mrkt	N/A		-	\$ -		
Local Agency Investment Fund	LAIF	N/A	0.221%	3,406,732.26	\$ -	\$ 2,694,373.26	\$ 712,359.00
Golden State Business Bank	12 Month C.D.	October 15, 2021	0.50%	20,000.00	\$ 20,000.00		
			TOTAL:	\$ 6,269,888.87	\$ 2,114,507.73	\$ 3,443,022.14	\$ 712,359.00

2021 Production

CHINO BASIN	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Yearly Production Rights = 1232	48.22%	48.22%	48.22%	48.27%	48.27%	54.91%	10.19%	20.12%	30.06%	39.99%	49.92%	59.86%	
Well #12 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #15 - Domestic	0.26	-	-	0.21	-	-	0.21	-	-	-	-	-	0.68
Well #16 - Domestic	0.38	-	-	0.35	-	81.84	125.31	122.38	-	-	-	-	330.26
Well#18 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	0.63	-	-	0.57	-	81.84	125.53	122.38	-	-	-	-	330.94
CUCAMONGA BASIN	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Yearly Production Rights = 5938 (1438 10-yr Average Spread)	6.36%	10.93%	16.24%	26.51%	39.28%	52.24%	65.43%	78.74%	92.04%	105.33%	118.63%	131.93%	
Well #2	116.28	106.84	119.05	110.77	111.87	107.97	110.79	110.97	-	-	-	-	894.55
Well #3	0.36	-	-	0.30	-	-	0.35	10.49	-	-	-	-	11.50
Well#19 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #22	9.59	12.37	14.41	33.01	44.77	58.63	58.30	56.08	-	-	-	-	287.17
Well #24	82.97	-	-	291.70	362.60	350.43	357.71	356.49	-	-	-	-	1,801.89
Well #31	1.60	-	-	0.44	6.56	15.09	23.63	5.57	-	-	-	-	52.89
Well #32 - Domestic	-	-	-	-	-	11.49	10.28	23.37	-	-	-	-	45.14
Upl. # 15 (SAWCo's Rts)	166.97	152.06	181.80	173.52	232.59	225.78	222.33	227.46	-	-	-	-	1,582.51
Subtotal	377.76	271.27	315.27	609.74	758.39	769.40	783.39	790.43	-	-	-	-	4,675.65
Upl. # 15 (WECWCo's Rts) <small>Memo Only</small>	-	-	-	-	-	-	-	-	-	-	-	-	-
SIX BASINS	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Yearly Production Rights = 932	9.99%	19.26%	29.56%	39.46%	49.43%	58.54%	67.45%	76.33%	85.18%	94.03%	102.88%	111.73%	
Well #25-A	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #26	43.34	39.01	42.64	39.52	41.51	39.11	39.47	37.47	-	-	-	-	322.07
Well 27-A	49.74	47.43	53.37	52.72	51.47	45.80	43.56	45.34	-	-	-	-	389.43
Subtotal	93.09	86.44	96.01	92.24	92.98	84.91	83.03	82.82	-	-	-	-	711.50
TOTAL PUMPED	471.48	357.71	411.27	702.54	851.37	936.15	991.94	995.63	-	-	-	-	5,718.09
GRAVITY FLOW	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
V screen	185.92	206.08	236.83	190.51	158.15	110.86	99.15	68.27	-	-	-	-	1,255.78
backwash from city treatment plant	0.47	0.44	0.57	0.49	0.47	0.70	0.37	-	-	-	-	-	3.50
San Antonio Tunnel (forebay)	217.65	172.74	169.73	169.47	181.36	166.10	176.04	137.57	-	-	-	-	1,390.65
Frankish & Stamm Tunnel 8"	-	-	-	0.01	-	-	0.80	-	-	-	-	-	0.81
San Ant. Tunnel Connect to City	-	-	-	-	-	-	-	-	-	-	-	-	-
Discharge to waste	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL GRAVITY	404.04	379.26	407.13	360.48	339.99	277.66	276.36	205.84	-	-	-	-	2,650.75
Monthly	San Antonio Tunnel	Frankish & Stamm Tunnel and TP Backwash	Gravity Production	THIS YEAR									
San Antonio Tunnel	217.65	172.74	169.73	1,390.65									
Frankish & Stamm Tunnel and TP Backwash	186.39	206.51	237.40	1,260.10									
Gravity Production	404.04	379.26	407.13	2,650.75									
Cumulative	San Antonio Tunnel	Frankish & Stamm Tunnel and TP Backwash	Gravity Production	THIS YEAR									
San Antonio Tunnel	217.65	390.39	560.12	1,390.65									
Frankish & Stamm Tunnel and TP Backwash	186.39	392.91	630.31	1,260.10									
Gravity Production	404.04	783.30	1,190.43	2,650.75									
Purchased Water - Upl. City to Dom. Sys.	-	-	-	-									
Total Production	875.52	736.96	818.40	1,063.02	1,191.35	1,213.81	1,268.31	1,201.47	-	-	-	-	8,368.84
Total Cumulative Production	875.52	1,612.49	2,430.89	3,493.91	4,685.26	5,899.06	7,167.37	8,368.84	-	-	-	-	-
Domestic Production	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Domestic Production	218.28	172.74	169.73	170.03	181.36	259.43	311.85	283.31	-	-	-	-	1,766.73
Irrigation Production	657.24	564.22	648.67	892.99	1,009.99	954.38	956.46	918.16	-	-	-	-	6,602.10
RainFall (Inches)	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
RainFall (Inches)	3.31	0.03	1.52	0.88	0.45	0.01	0.19	-	-	-	-	-	
Cumulative (Inches)	3.31	3.34	4.86	5.74	6.19	6.20	6.39	6.39	-	-	-	-	

2021 Consumption

DOMESTIC	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Dom. Sys. - Base	61.06	32.19	65.32	53.12	142.97	35.73	139.41	81.22	-	-	-	-	611.02
Dom. Sys. - Supplemental	10.29	23.50	9.82	32.58	12.78	51.12	17.29	56.89	-	-	-	-	214.27
Dom Sys - Tier 3	4.81	20.39	4.48	29.01	8.13	32.52	3.20	40.95	-	-	-	-	143.49
Dom. Sys. - Del. to Upland(24th/Campus)	33.91	28.44	31.25	35.94	22.70	6.20	-	-	-	-	-	-	158.45
Dom. Sys. -Del. To Upland (Well 16/15)	-	-	-	0.35	-	81.84	125.31	122.38	-	-	-	-	329.88
Dom. Sys. - Del. to Upland(24th/Mtn)-installed 4/2/19	-	-	-	-	-	-	-	0.03	-	-	-	-	0.03
Tunnel meter to the Upland	-	-	-	-	-	-	-	-	-	-	-	-	-
Discharge to waste	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	110.07	104.52	110.87	151.00	186.58	207.41	285.21	301.47	-	-	-	-	1,457.13

Truck Loads - note only crosswall projects	-	-	-	-	-	-	-	-	-	-	-	-	-
Well 32 Hydrant Mtr. - note only(started 8/6/18)Crosswalls	-	-	-	-	-	-	-	-	-	-	-	-	-

Irr. Note only Del. to MVWD(wheeled through Upland)	35.64	-	-	-	-	-	-	-	-	-	-	-	35.64
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IRRIGATION	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Irrig. Sys.-Upland(Pump & Rec'd) (City W#15)	166.97	152.06	181.80	173.52	232.59	225.78	222.33	227.46	-	-	-	-	1,582.51
Irrig. Sys. - Upl. City - Tier 1	297.99	268.16	296.42	535.74	596.17	529.96	528.92	472.10	-	-	-	-	3,525.45
Irrig. Sys. - Upl. City - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Monte Vista - Tier 1	85.54	46.00	49.90	47.40	37.90	45.00	44.30	43.50	-	-	-	-	399.54
Irrig. Sys. - Monte Vista - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Ont. City - Tier 1	44.20	40.70	44.30	42.00	33.70	39.90	39.20	38.60	-	-	-	-	322.60
Irrig. Sys. - Ont. City - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Cucamonga Valley - Tier 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Cucamonga Valley - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Holiday Rock Co - Tier 1	14.52	14.52	14.29	18.22	21.60	21.88	31.06	31.30	-	-	-	-	167.39
Irrig. Sys. - Holiday Rock Co - Tier 2	0.85	0.43	-	-	-	-	-	-	-	-	-	-	1.28
Irrig. Sys. - Holiday Rock Co - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hill Golf Course - Tier 1	8.86	11.88	13.85	30.66	37.72	46.37	52.27	52.27	-	-	-	-	253.88
Irrig. Sys. - Red Hill Golf Course - Tier 2	-	-	-	0.75	5.11	9.82	3.02	1.68	-	-	-	-	20.36
Irrig. Sys. - Red Hill Golf Course - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hills HOA - Tier 1	0.06	0.05	0.05	1.41	1.37	1.88	2.32	1.83	-	-	-	-	8.96
Irrig. Sys. - Red Hills HOA - Tier 2	-	-	-	0.11	-	-	-	-	-	-	-	-	0.11
Irrig. Sys. - Red Hills HOA - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Minor Irrigators - Tier 1	0.49	1.67	0.38	1.30	5.37	5.16	7.08	6.86	-	-	-	-	28.32
Irrig. Sys. - Minor Irrigators - Tier 2	-	-	-	0.12	1.58	1.57	0.51	0.56	-	-	-	-	4.33
Irrig. Sys. - Minor irrigators - Tier 3	-	-	-	-	-	0.03	-	-	-	-	-	-	0.03
TOTAL	619.49	535.47	600.98	851.22	973.10	927.35	930.99	876.15	-	-	-	-	6,314.76

COMPANY TOTALS	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
San Antonio Heights	76.16	76.08	79.62	114.71	163.88	119.37	159.90	179.06	-	-	-	-	968.78
City of Upland	498.87	448.65	509.48	745.55	851.46	843.79	876.55	821.96	-	-	-	-	5,596.31
Monte Vista Water District	85.54	46.00	49.90	47.40	37.90	45.00	44.30	43.50	-	-	-	-	399.54
City of Ontario	44.20	40.70	44.30	42.00	33.70	39.90	39.20	38.60	-	-	-	-	322.60
Cucamonga Valley Water District	-	-	-	-	-	-	-	-	-	-	-	-	-
Holiday Rock Company	15.38	14.95	14.29	18.22	21.60	21.88	31.06	31.30	-	-	-	-	168.67
Red Hills Golf Course	8.86	11.88	13.85	31.41	42.83	56.19	55.28	53.94	-	-	-	-	274.24
Red Hill HOA	0.06	0.05	0.05	1.51	1.37	1.88	2.32	1.83	-	-	-	-	9.07
Minor Irrigators	0.49	1.67	0.38	1.42	6.95	6.76	7.59	7.42	-	-	-	-	32.68
TOTAL	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	7,771.89

IRRIGATORS	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Irrigator Emberton	0.03	0.05	0.04	0.58	0.47	1.41	0.87	0.93	-	-	-	-	4.38
Irrigator McMurray	-	-	-	-	-	-	0.60	-	-	-	-	-	0.60
Irrigator Mistretta	-	-	-	-	0.65	0.65	0.49	0.48	-	-	-	-	2.26
Irrigator Nisbit	-	-	-	-	1.12	-	0.88	1.18	-	-	-	-	3.18
Irrigator Scheu	-	0.75	-	-	4.00	4.00	4.01	4.00	-	-	-	-	16.75
Irrigator Pfister	0.46	0.87	0.34	0.84	0.72	0.70	0.74	0.83	-	-	-	-	5.50

2021 Spread and Storage

Cucamonga Basin	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
23rd St. (Meter) - Basin 6 - A	50.37	2.54	0.04	0.01	5.78	0.05	0.01	-	-	-	-	-	58.80
15th Street Basin	-	-	-	-	-	0.06	-	-	-	-	-	-	0.06
Basin 3 meter (23rd street Clock)	60.00	69.10	83.48	51.39	41.12	21.70	15.87	32.07	-	-	-	-	374.72
Frankish & Stamm Tunnel to Basin 3	-	-	-	0.01	-	-	0.80	-	-	-	-	-	0.81
Vscreen via Frankish & Stamm Meter to Basin 3	-	-	-	-	-	-	-	-	-	-	-	-	-
PRV Station (res 1)(basin 6)	0.32	-	-	-	-	-	-	-	-	-	-	-	0.32
Monthly Spread	110.69	71.64	83.53	51.41	46.90	21.80	16.68	32.07	-	-	-	-	434.71
Cumulative Spread	110.69	182.33	265.86	317.27	364.16	385.96	402.64	434.71	-	-	-	-	

Six Basins

Note: City of Upland Well Exercising may contribute to spread

Monthly Spread	33.29	17.80	17.24	9.08	10.63	14.00	9.52	1.42	-	-	-	-	112.97
Cumulative Spread	33.29	51.09	68.33	77.41	88.04	102.04	111.55	112.97	-	-	-	-	

Note: Maximum end of year storage limit: 2,000 AF

Previous Storage	1,953.00	1,970.87	1,979.90	1,978.80	1,973.31	1,968.62	1,975.38	1,979.53					
Spread	33.29	17.80	17.24	9.08	10.63	14.00	9.52	1.42	-	-	-	-	
Unused Monthly OSY	(15.42)	(8.77)	(18.34)	(14.57)	(15.31)	(7.24)	(5.36)	(5.15)					
Current Storage Estimate	1,971	1,980	1,979	1,973	1,969	1,975	1,980	1,976	-	-	-	-	

932 yearly OSY = 77.67 monthly OSY

Chino Basin

Monthly Spread	-	-	-	-	-	-	-	-	-	-	-	-	-
Cumulative Spread	-	-	-	-	-	-	-	-	-	-	-	-	-

Local Supplemental Account (Spreading)*	3,923.25	3,923.25	3,923.25	3,923.25	3,923.25	3,923.25	3,923.25	3,923.25	-	-	-	-	-
Carry Over Account	1,232.00	1,232.00	1,232.00	1,232.00	1,232.00	1,232.00	1,232.00	1,232.00	-	-	-	-	-
Excess Carry Over Account*	1,433.40	1,535.44	1,638.10	1,740.77	1,842.87	1,945.54	1,966.37	1,943.51	-	-	-	-	-
Preemptive Replenishment Account	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Storage	6,588.65	6,690.69	6,793.35	6,896.02	6,998.12	7,100.79	7,121.62	7,098.76	-	-	-	-	-
Spread	-	-	-	-	-	-	-	-	-	-	-	-	-
Unused Monthly OSY	102.04	102.67	102.67	102.10	102.67	20.83	(22.86)	(19.71)	-	-	-	-	-
Current Storage Estimate*	6,691	6,793	6,896	6,998	7,101	7,122	7,099	7,079	-	-	-	-	-

1,232 yearly OSY = 102.67 monthly OSY

* Does not include yearly storage losses calc of 0.07%

Company Wide

Monthly Spread	143.98	89.44	100.77	60.49	57.52	35.80	26.19	33.49	-	-	-	-	547.68
Cumulative Spread	143.98	233.42	334.18	394.68	452.20	488.00	514.20	547.68	-	-	-	-	
Total Current Storage Estimate	8,662	8,773	8,875	8,971	9,069	9,097	9,078	9,055					

Meter to spread ponds (NOTE ONLY)	97.77	51.50	-	8,209.55	89.72	92.93	96.30	102.32	-	-	-	-	8,740.09
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2021 GW Production Rights

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

Cucamonga Basin Production

Yearly Production Rights = 5938 (4,500AF + 1438AF 10-yr Average Spread)

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production	377.76	271.27	315.27	609.74	758.39	769.40	783.39	790.43	-	-	-	-	
Cumulative Production	377.76	649.03	964.30	1,574.04	2,332.43	3,101.83	3,885.22	4,675.65	-	-	-	-	4,675.65
Cumulative Production Rights	494.85	989.69	1,484.54	1,979.39	2,474.23	2,969.08	3,463.93	3,958.78	-	-	-	-	5,938
% of Production Rights*	6.36%	10.93%	16.24%	26.51%	39.28%	52.24%	65.43%	78.74%	92.04%	105.33%	118.63%	131.93%	78.7%

Six Basins Production

Yearly Production Rights = 932AF

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production	93.09	86.44	96.01	92.24	92.98	84.91	83.03	82.82	-	-	-	-	
Cumulative Production	93.09	179.53	275.53	367.77	460.75	545.66	628.68	711.50	-	-	-	-	711.50
Cumulative Production Rights	77.68	155.35	233.03	310.70	388.38	466.05	543.73	621.40	-	-	-	-	932
% of Production Rights*	9.99%	19.26%	29.56%	39.46%	49.43%	58.54%	67.45%	76.33%	85.18%	94.03%	102.88%	111.73%	76.3%

Chino Basin Production

Note: Chino Basin production rights are calculated from July through June.

Yearly Production Rights = 1232AF

	Dec-19	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production		0.63	-	-	0.57	-	81.84	125.53	122.38	-	-	-	-	330.94
Cumulative Production for 2020		0.63	0.63	0.63	1.20	1.20	83.04	208.56	330.94	-	-	-	-	
Water Year 20-21														
Cumulative Production	593.50	594.13	594.13	594.13	594.70	594.70	676.54							676.54
Cumulative Rights	616.00	718.67	821.33	924.00	1,026.67	1,129.33	1,232.00							1,232.00
% of Production Rights 19-20*		48.22%	48.22%	48.22%	48.27%	48.27%	54.91%							
Water Year 21-22														
Cumulative Production								125.53	247.90	-	-	-	-	373.43
Cumulative Rights								102.67	205.33	308.00	410.67	513.33	616.00	1,232.00
% of Production Rights 20-21*								10.19%	20.12%	30.06%	39.99%	49.92%	59.86%	

* - Out months are Exponential Smoothing (ETS) forecasts based on basin production to date

Chino Basin	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	WY1920
Water Year 19-20													
Cumulative Production	131.34	260.92	384.03	499.44	593.50	593.50	594.13	594.13	594.13	594.69	594.69	676.53	
Cumulative Rights	102.67	205.33	308.00	410.67	513.33	616.00	718.67	821.33	924.00	1,026.67	1,129.33	1,232.00	1,232.00
% of Production Rights 1920	10.66%	21.18%	31.17%	40.54%	48.17%	48.17%	48.22%	48.22%	48.22%	48.27%	48.27%	54.91%	

2021 Production v Consumption

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
		8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%

Consumption versus Entitlement, Company Wide **Active Shares**

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	
Cumulative Consumption	729.57	1,369.55	2,081.41	3,083.63	4,243.31	5,378.07	6,594.28	7,771.89	-	-	-	-	7,771.89
Cumulative Entitlement (straight line)	1,047.68	2,095.37	3,143.05	4,190.73	5,238.41	6,286.10	7,333.78	8,381.46	-	-	-	-	12,572
% of Entitlement*	5.80%	10.89%	16.56%	24.53%	33.75%	42.78%	52.45%	61.82%	71.21%	80.60%	90.00%	99.39%	61.8%

Consumption versus Entitlement, Company Wide **Total Shares**

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	
Cumulative Consumption	729.57	1,369.55	2,081.41	3,083.63	4,243.31	5,378.07	6,594.28	7,771.89	-	-	-	-	7,771.89
Cumulative Entitlement (straight line)	1,083.33	2,166.67	3,250.00	4,333.33	5,416.67	6,500.00	7,583.33	8,666.67	-	-	-	-	13,000
% of Entitlement*	5.61%	10.54%	16.01%	23.72%	32.64%	41.37%	50.73%	59.78%	68.87%	77.95%	87.03%	96.12%	59.8%

Production versus Consumption, Company Wide

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production	875.52	736.96	818.40	1,063.02	1,191.35	1,213.81	1,268.31	1,201.47	-	-	-	-	8,368.84
Consumption	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	7,771.89
Spread	143.98	89.44	100.77	60.49	57.52	35.80	26.19	33.49	-	-	-	-	547.68
Total Consumption	873.55	729.42	812.62	1,062.71	1,217.20	1,170.57	1,242.40	1,211.10	-	-	-	-	8,319.57
Difference	1.98	7.54	5.78	0.30	(25.85)	43.24	25.91	(9.63)	-	-	-	-	49.27
% of Production	0.2%	1.0%	0.7%	0.0%	-2.2%	3.6%	2.04%	-0.8%	0.0%	0.0%	0.0%	0.0%	0.6%

Production versus Consumption, Domestic System

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production	218.28	172.74	169.73	170.03	181.36	259.43	311.85	283.31	-	-	-	-	1,766.73
Consumption	110.07	104.52	110.87	151.00	186.58	207.41	285.21	301.47	-	-	-	-	1,457.13
Monthly Difference	108.21	68.23	58.86	19.03	(5.22)	52.02	26.64	(18.15)	-	-	-	-	309.60
% difference	98.30%	65.28%	53.08%	12.60%	-2.80%	25.08%	9.34%	-6.02%	0.00%	0.00%	0.00%	0.00%	21.2%

Production versus Consumption, Irrigation System

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Production	657.24	564.22	648.67	892.99	1,009.99	954.38	956.46	918.16	-	-	-	-	6,602.10
Addition from Domestic	108.21	68.23	58.86	19.03	(5.22)	52.02	26.64	(18.15)	-	-	-	-	309.60
Total Production	765.45	632.45	707.53	912.02	1,004.77	1,006.40	983.10	900.00	-	-	-	-	6,911.70
Consumption	763.47	624.91	701.75	911.71	1,030.62	963.15	957.19	909.63	-	-	-	-	6,862.44
Monthly Difference	1.98	7.54	5.78	0.30	(25.85)	43.24	25.91	(9.63)	-	-	-	-	49.27
% difference	0.26%	1.21%	0.82%	0.03%	-2.51%	4.49%	2.71%	-1.06%	0.00%	0.00%	0.00%	0.00%	0.7%

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

2021 Consumption Analysis

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

COMPANY TOTALS

Active Shares

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	
Cumulative Consumption	729.57	1,369.55	2,081.41	3,083.63	4,243.31	5,378.07	6,594.28	7,771.89	-	-	-	-	7,771.89
Cumulative Entitlement	984.12	1,968.25	2,968.97	3,984.49	5,033.15	6,122.41	7,880.62	2,232.01	-	-	-	-	12,572.19
% of Yearly Entitlement*	5.80%	10.89%	16.56%	24.53%	33.75%	42.78%	52.45%	61.82%	71.21%	80.60%	90.00%	99.39%	61.82%

Shares 6,179

COMPANY TOTALS

All Shares

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	729.57	639.99	711.86	1,002.22	1,159.68	1,134.76	1,216.20	1,177.61	-	-	-	-	
Cumulative Consumption	729.57	1,369.55	2,081.41	3,083.63	4,243.31	5,378.07	6,594.28	7,771.89	-	-	-	-	7,771.89
Cumulative Entitlement	1,083.33	2,166.67	3,250.00	4,333.33	5,416.67	6,500.00	7,583.33	8,666.67	-	-	-	-	13,000.00
% of Yearly Entitlement*	5.61%	10.54%	16.01%	23.72%	32.64%	41.37%	50.73%	59.78%	68.87%	77.95%	87.03%	96.12%	59.78%

Shares 6,389

San Antonio Heights

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	76.16	76.08	79.62	114.71	163.88	119.37	159.90	179.06	-	-	-	-	
Cumulative Consumption	76.16	152.24	231.86	346.57	510.45	629.82	789.72	968.78	-	-	-	-	968.78
Cumulative Entitlement	68.48	136.95	215.53	303.12	410.89	543.36	692.68	842.00	-	-	-	-	1,268.66
% of Yearly Entitlement*	6.00%	12.00%	18.28%	27.32%	40.24%	49.64%	62.25%	76.36%	89.93%	103.51%	117.08%	130.66%	76.36%

Shares 624

City of Upland

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	498.87	448.65	509.48	745.55	851.46	843.79	876.55	821.96	-	-	-	-	
Cumulative Consumption	498.87	947.52	1,457.00	2,202.55	3,054.01	3,897.79	4,774.34	5,596.31	-	-	-	-	5,596.31
Cumulative Entitlement	765.53	1,531.06	2,296.59	3,062.13	3,827.66	4,593.19	-	-	-	-	-	-	9,186.38
% of Yearly Entitlement*	5.43%	10.31%	15.86%	23.98%	33.24%	42.43%	51.97%	60.92%	69.93%	78.93%	87.93%	96.94%	60.92%

Shares 4,514.75

Monte Vista Water District

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	85.54	46.00	49.90	47.40	37.90	45.00	44.30	43.50	-	-	-	-	
Cumulative Consumption	85.54	131.54	181.44	228.84	266.74	311.74	356.04	399.54	-	-	-	-	399.54
Cumulative Entitlement	56.04	112.08	168.12	224.16	280.20	336.24	392.28	448.32	-	-	-	-	672.48
% of Yearly Entitlement*	12.72%	19.56%	26.98%	34.03%	39.66%	46.36%	52.94%	59.41%	66.07%	72.69%	79.30%	85.90%	59.41%

Shares 331

City of Ontario

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR
Consumption	44.20	40.70	44.30	42.00	33.70	39.90	39.20	38.60	-	-	-	-	
Cumulative Consumption	44.20	84.90	129.20	171.20	204.90	244.80	284.00	322.60	-	-	-	-	322.60
Cumulative Entitlement	50.06	100.13	150.19	200.25	250.32	300.38	350.44	400.51	-	-	-	-	600.76
% of Yearly Entitlement*	7.36%	14.13%	21.51%	28.50%	34.11%	40.75%	47.27%	53.70%	60.30%	66.87%	73.44%	79.99%	53.70%

Shares 295

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

2021 Consumption Analysis

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

Cucamonga Valley Water District

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR	Shares	4
Consumption	-	-	-	-	-	-	-	-	-	-	-	-			
Cumulative Consumption	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cumulative Entitlement	-	-	-	-	-	-	-	-	-	-	-	-	8.14		
% of Yearly Entitlement*															

Holiday Rock Company

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR	Shares	132
Consumption	15.38	14.95	14.29	18.22	21.60	21.88	31.06	31.30	-	-	-	-			
Cumulative Consumption	15.38	30.33	44.61	62.83	84.43	106.32	137.37	168.67	-	-	-	-	168.67		
Cumulative Entitlement	14.52	29.05	45.72	64.29	87.15	115.25	146.92	178.60	-	-	-	-	269.10		
% of Yearly Entitlement*	5.71%	11.27%	16.58%	23.35%	31.38%	39.51%	51.05%	62.68%	74.27%	85.87%	97.46%	109.05%	62.68%		

Red Hills Golf Course

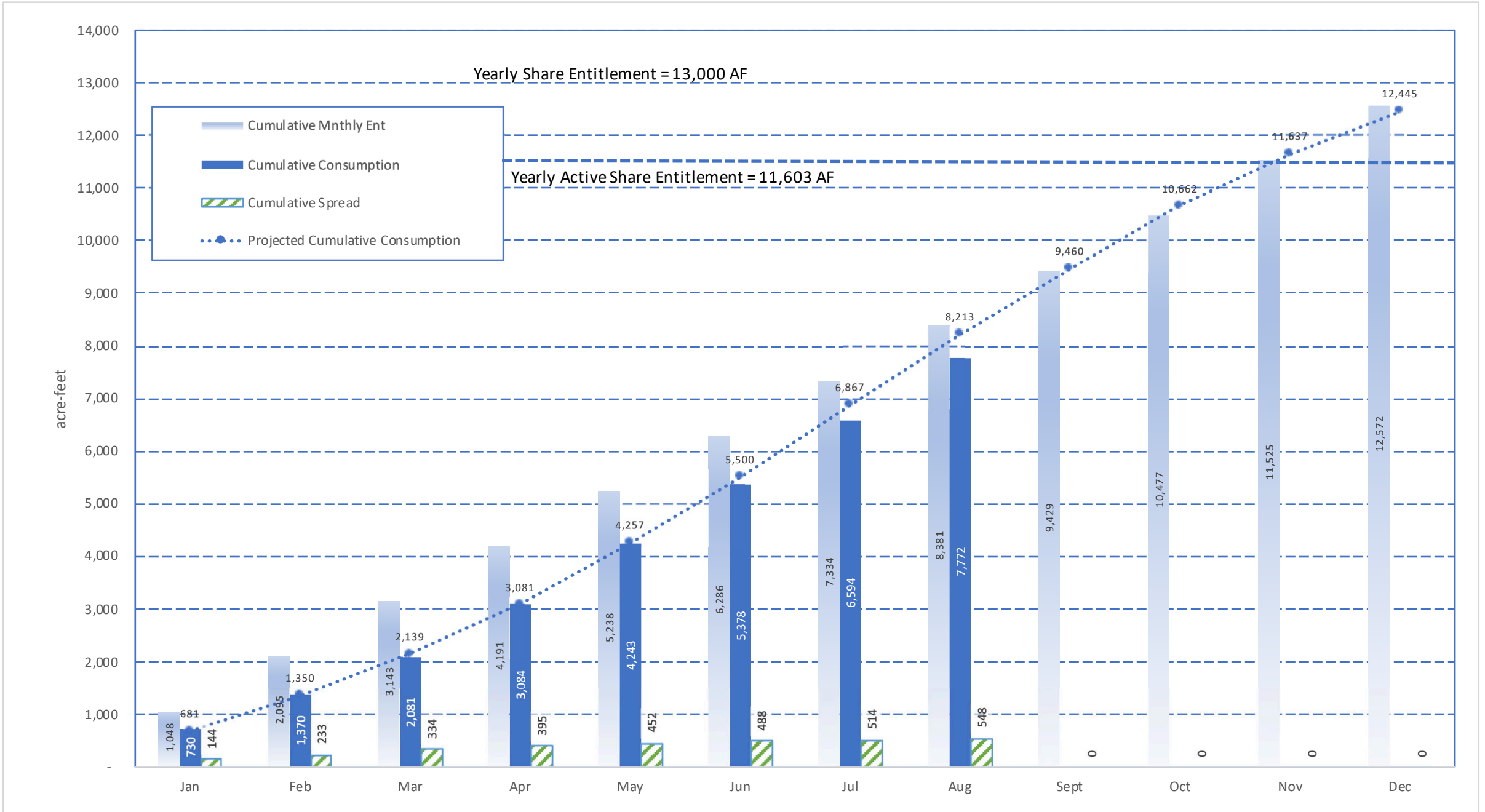
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR	Shares	218
Consumption	8.86	11.88	13.85	31.41	42.83	56.19	55.28	53.94	-	-	-	-			
Cumulative Consumption	8.86	20.74	34.59	66.00	108.83	165.02	220.30	274.24	-	-	-	-	274.24		
Cumulative Entitlement	23.97	47.94	75.45	106.10	143.83	190.20	242.46	294.73	-	-	-	-	444.08		
% of Yearly Entitlement*	2.00%	4.67%	7.79%	14.86%	24.51%	37.16%	49.61%	61.75%	73.93%	86.11%	98.29%	110.46%	61.75%		

Minor Irrigators

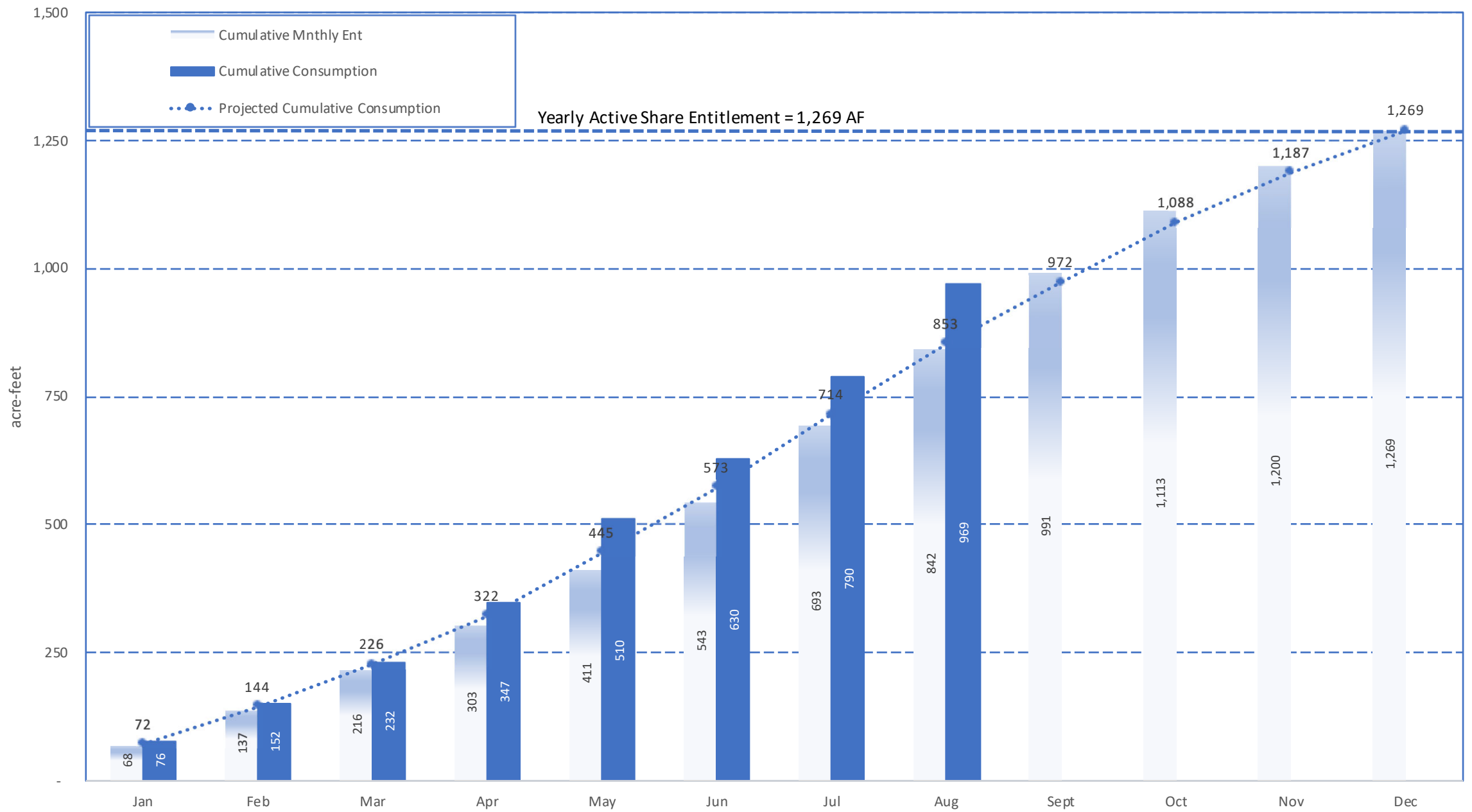
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	THIS YEAR	Shares	50
Consumption	0.49	1.67	0.38	1.42	6.95	6.76	7.59	7.42	-	-	-	-			
Cumulative Consumption	0.49	2.17	2.54	3.97	10.91	17.67	25.26	32.68	-	-	-	-	32.68		
Cumulative Entitlement	5.52	11.04	17.37	24.43	33.11	43.79	55.83	67.86	-	-	-	-	102.25		
% of Yearly Entitlement*	0.48%	2.12%	2.49%	3.88%	10.67%	17.28%	24.71%	31.96%	39.23%	46.49%	53.76%	61.03%	31.96%		

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

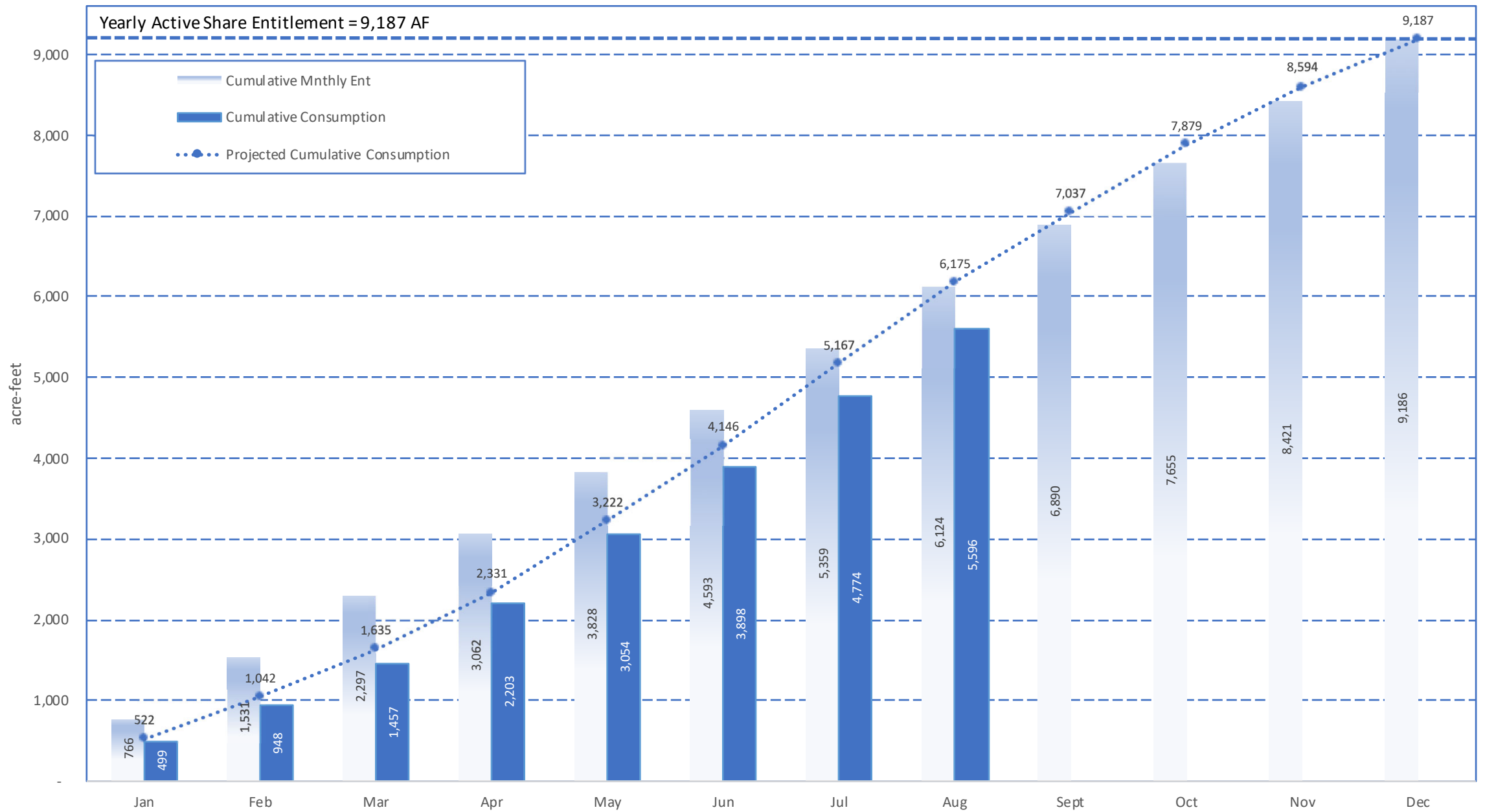
2021 Consumption Chart



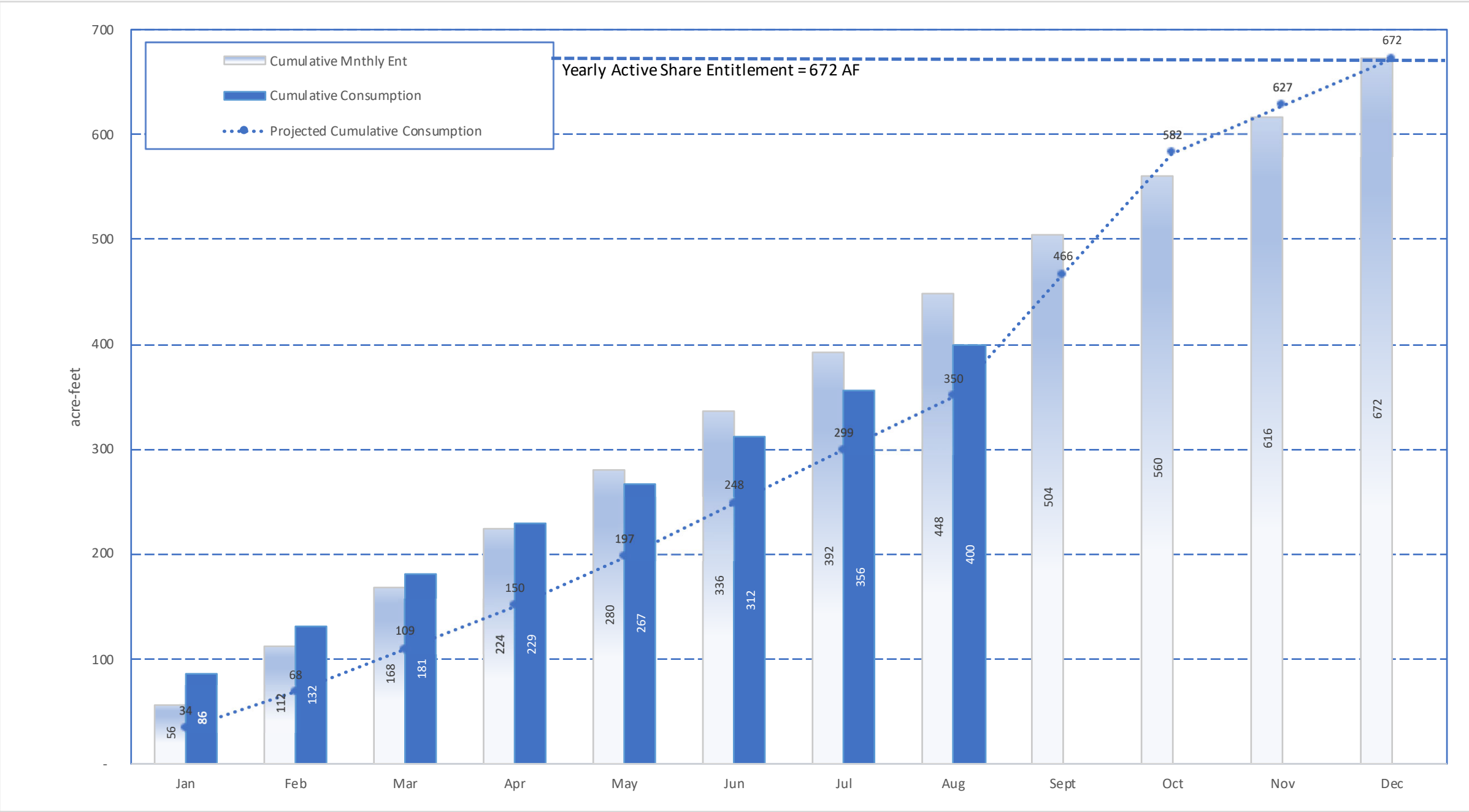
2021 Domestic Consumption



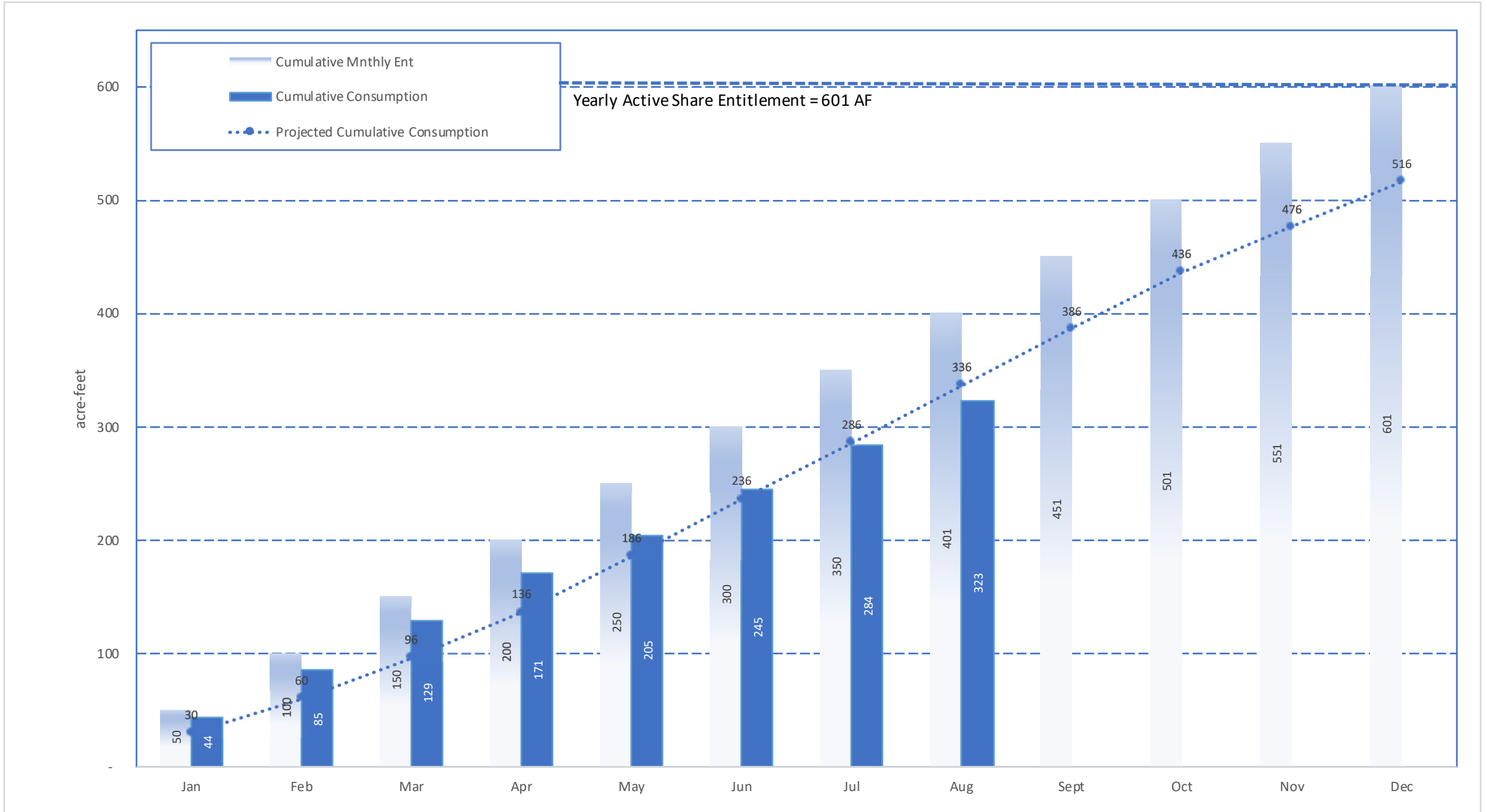
2021 Upland Consumption



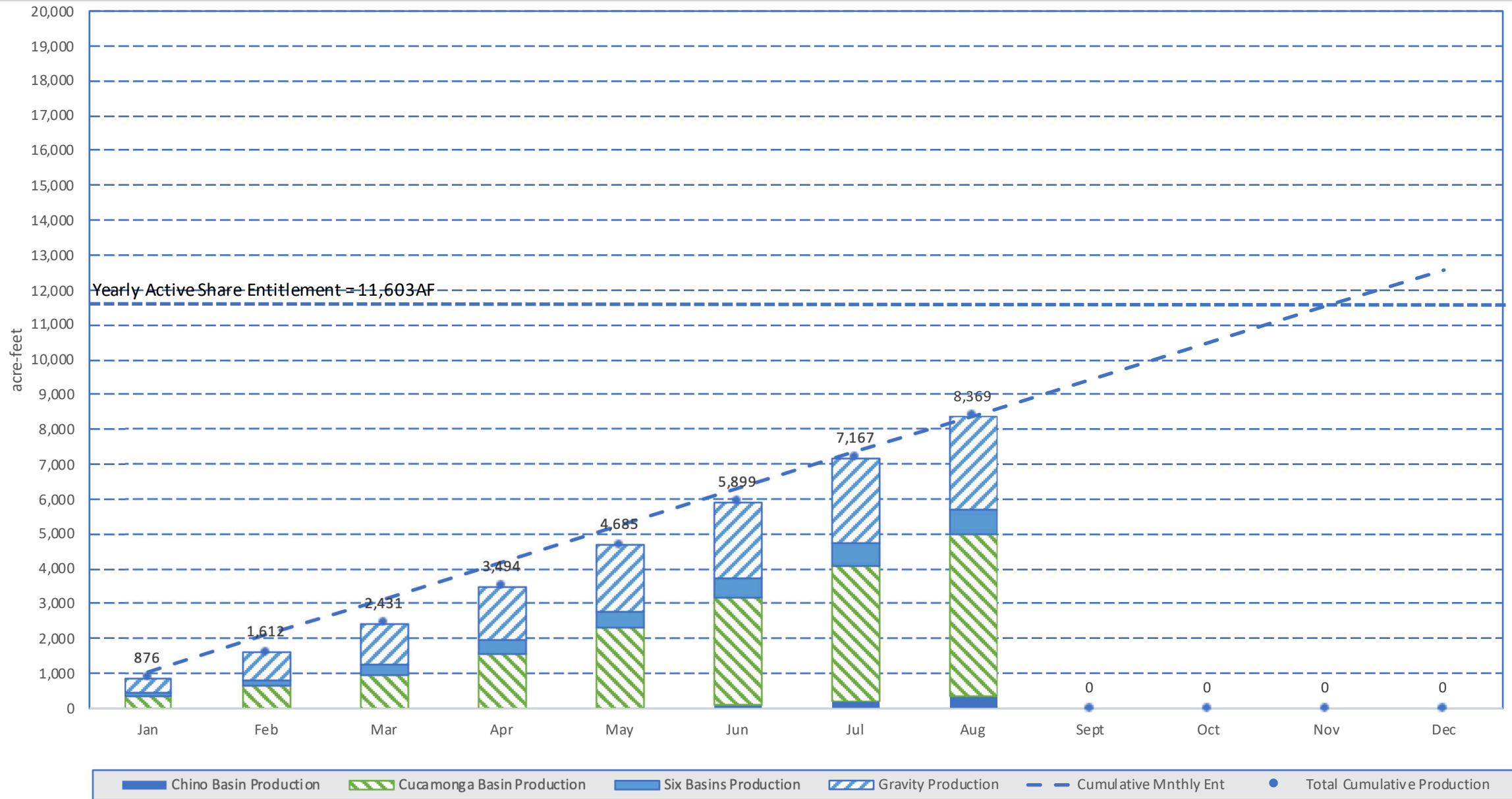
2021 Monte Vista Consumption



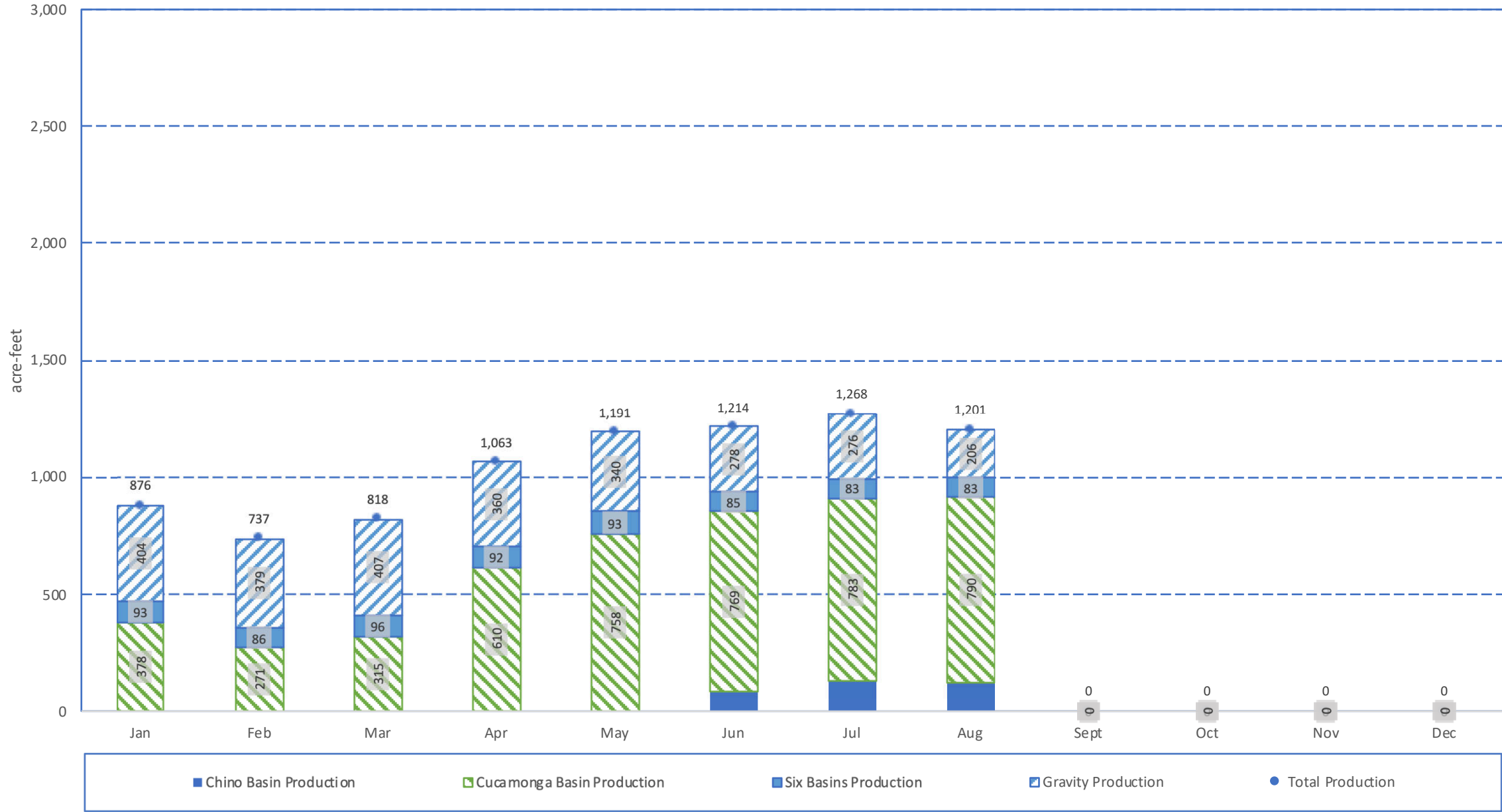
2021 Ontario Consumption



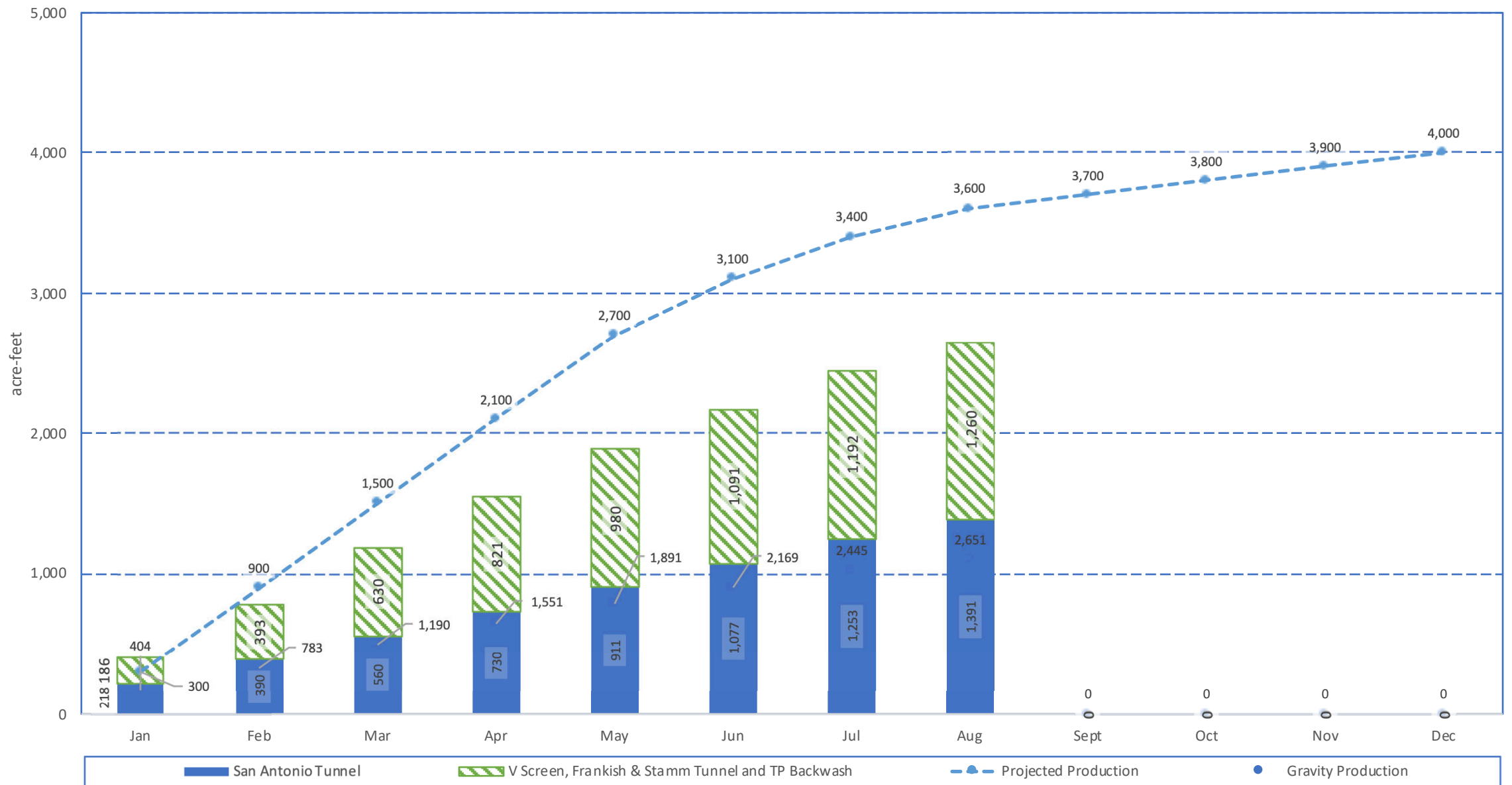
2021 Total Yearly Production



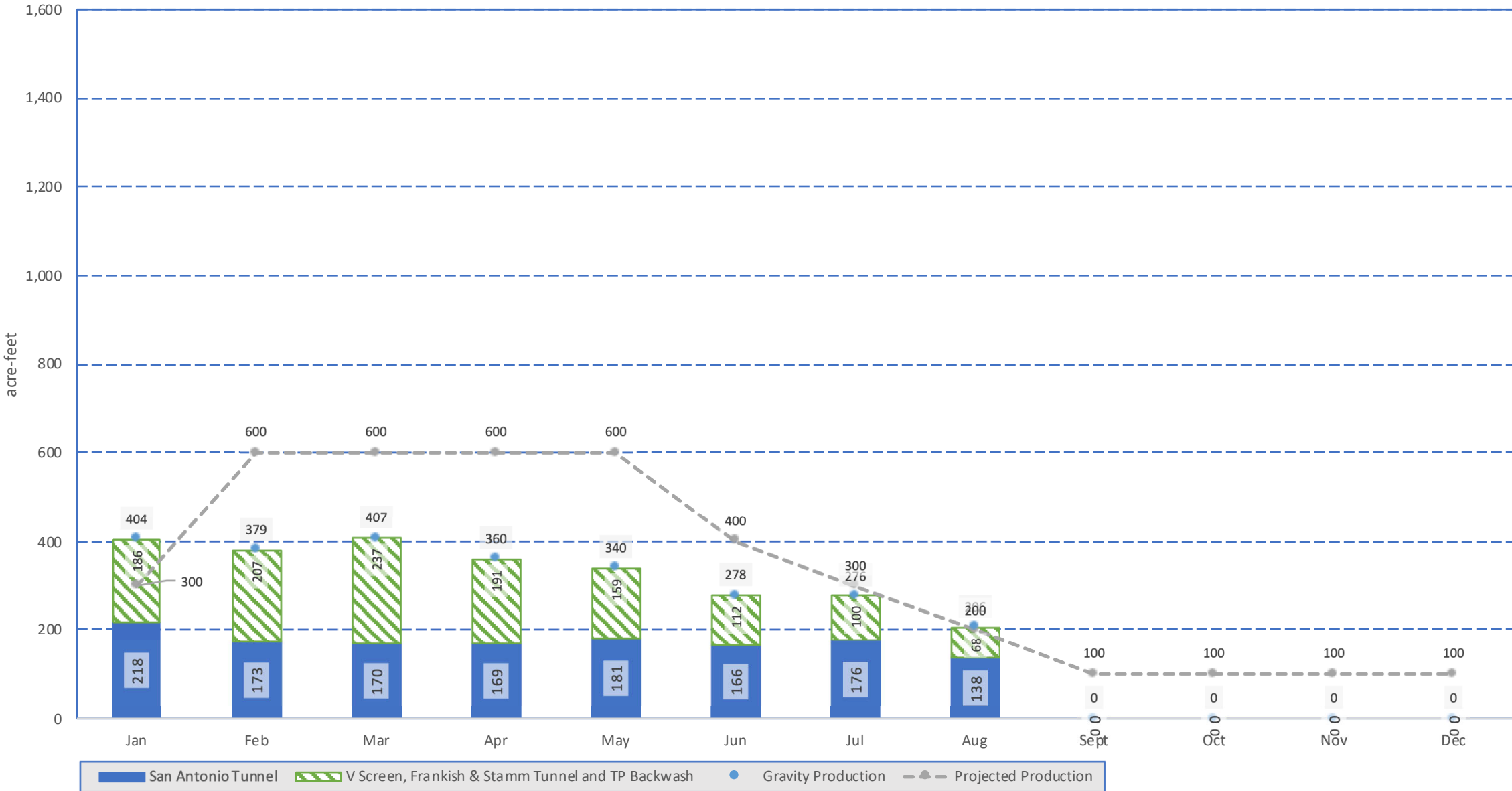
2021 Monthly Production



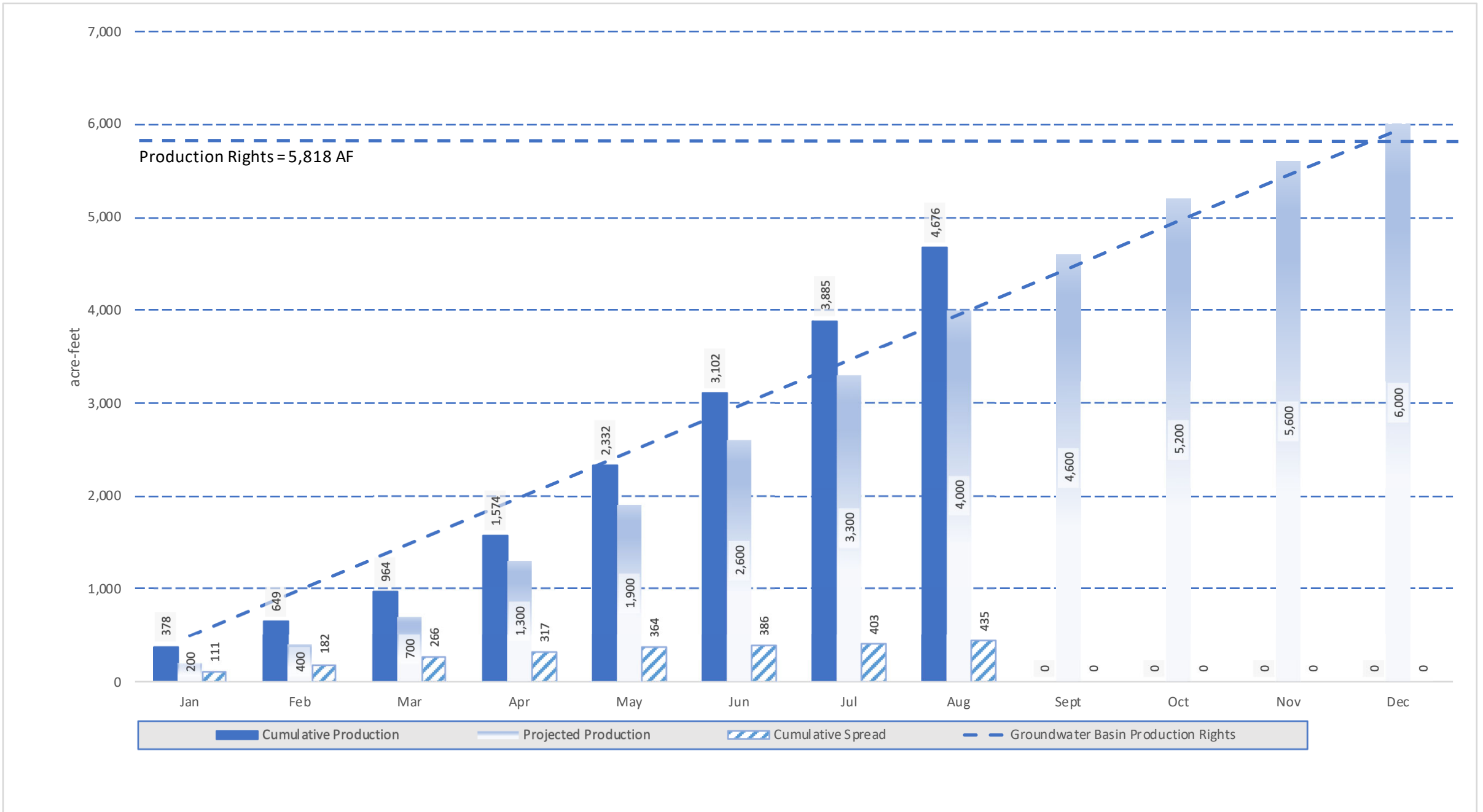
2021 Gravity Cumulative



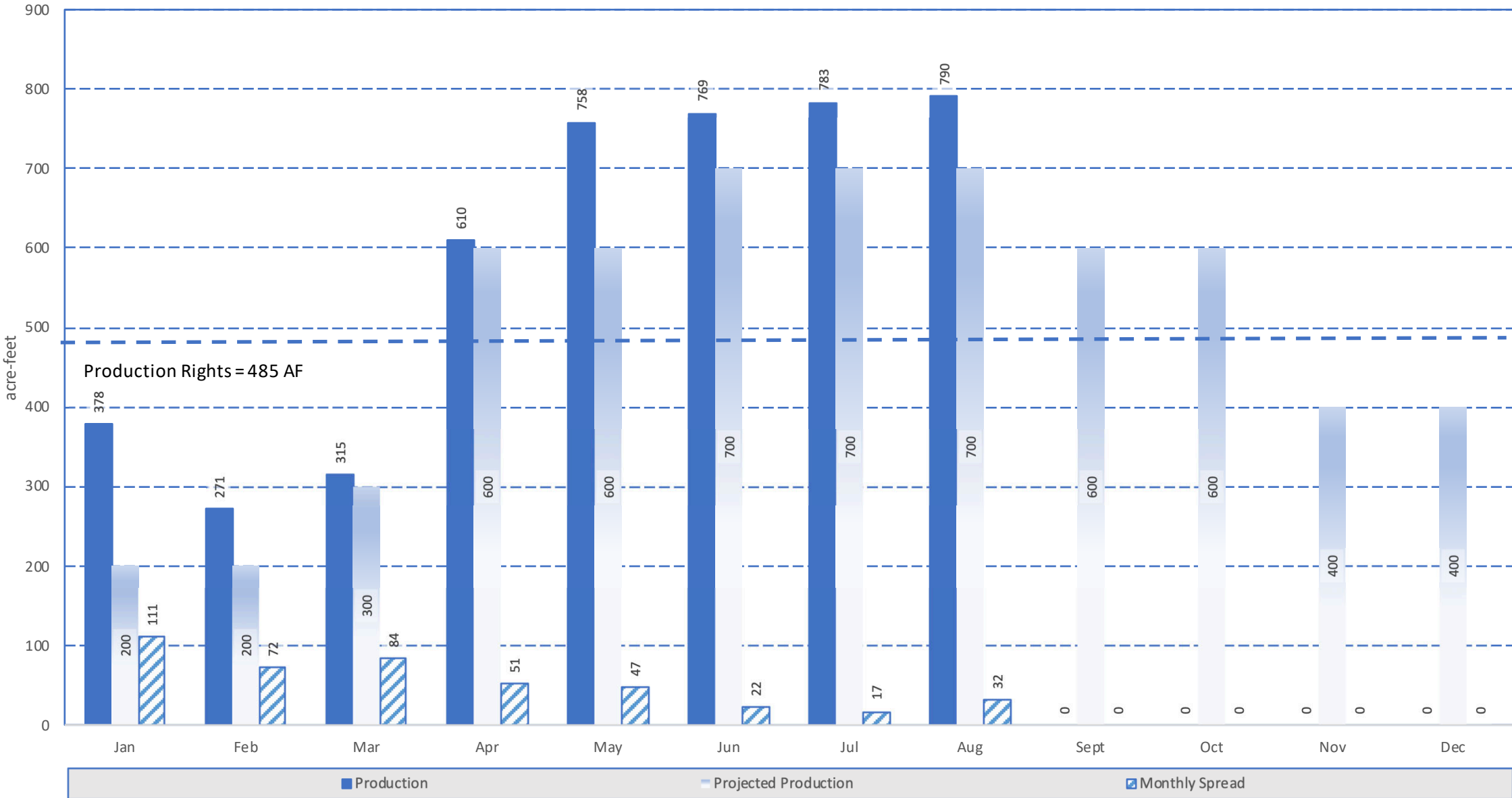
2021 Gravity Monthly



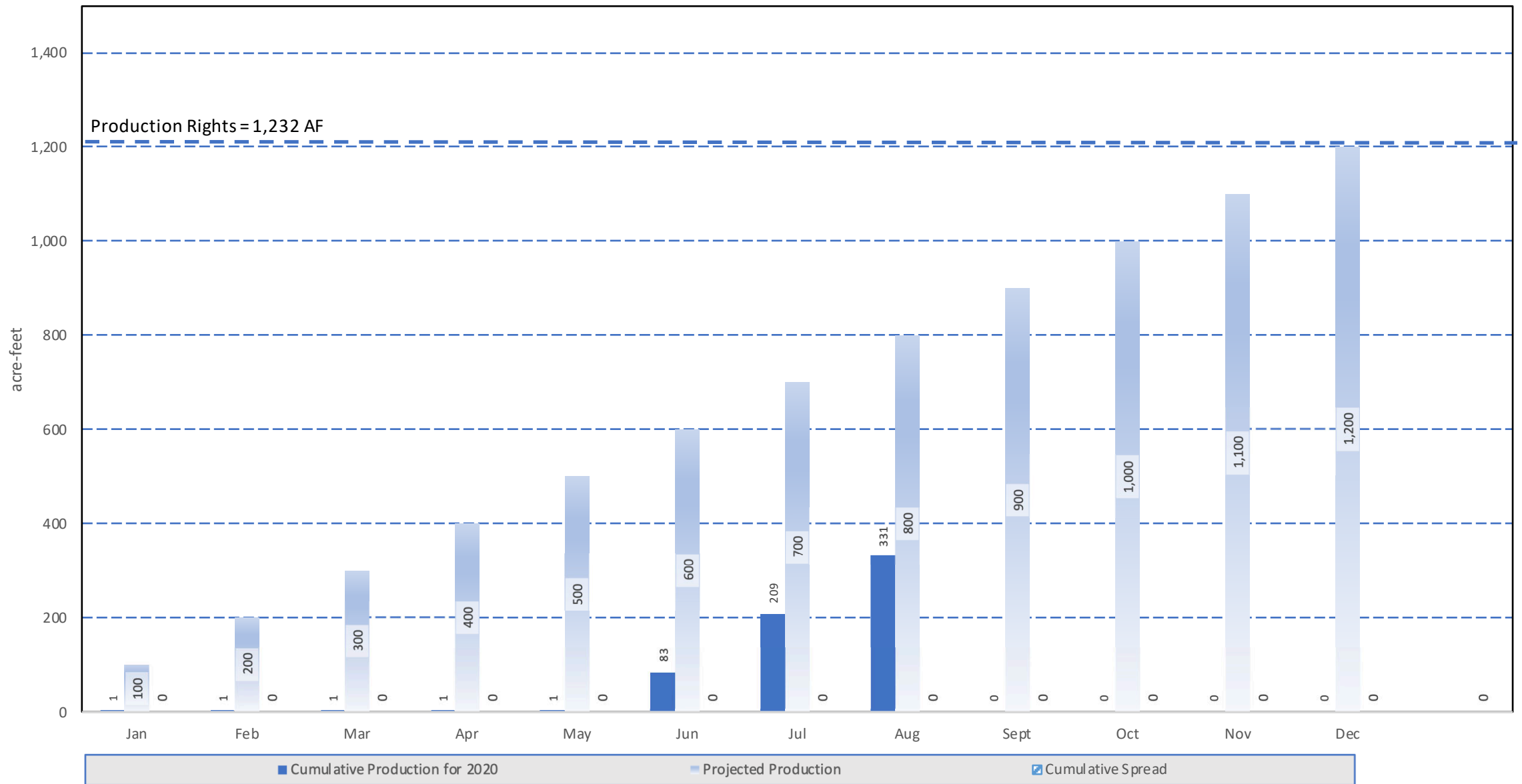
2021 Cucamonga Basin Cumulative



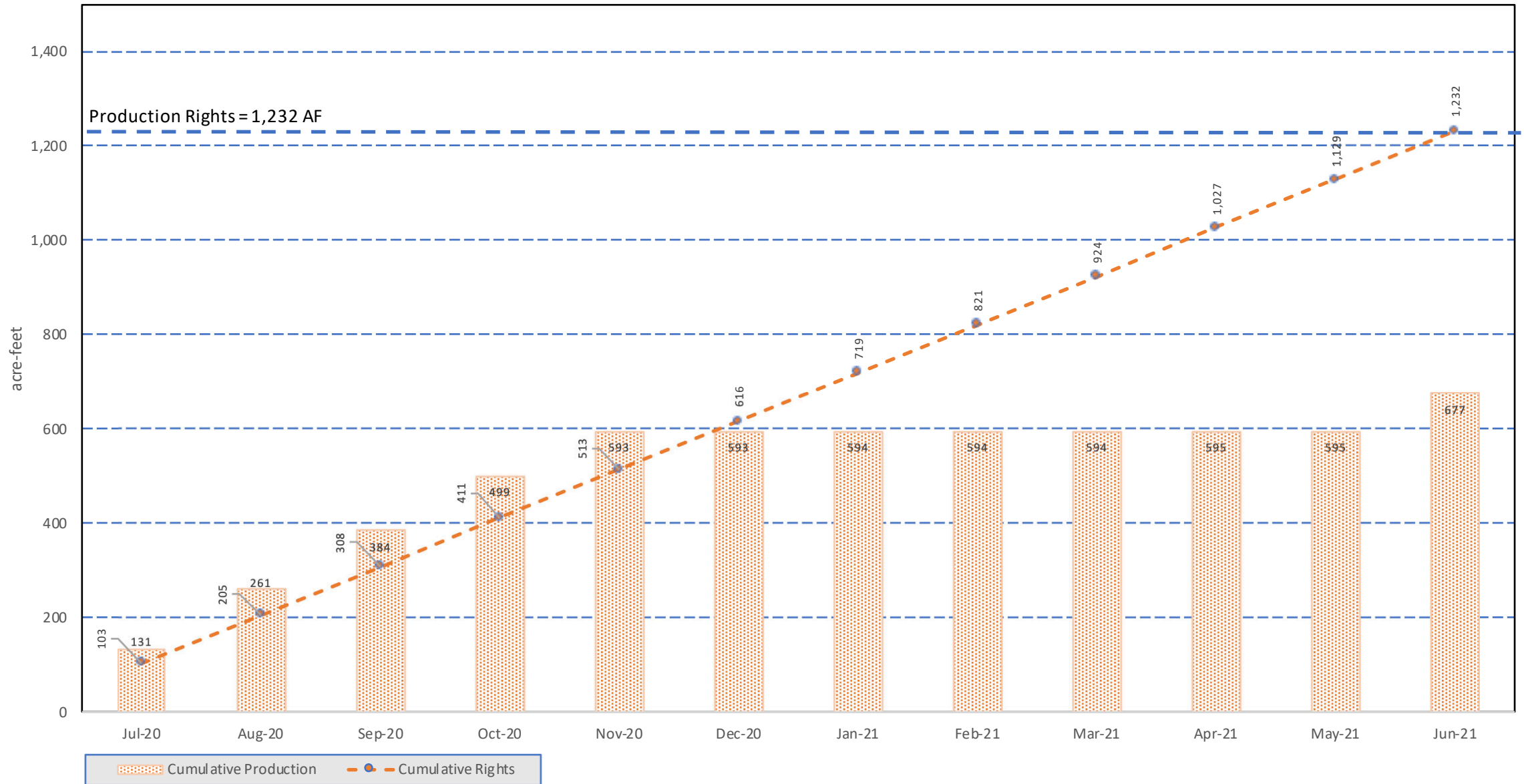
2021 Cucamonga Basin Monthly



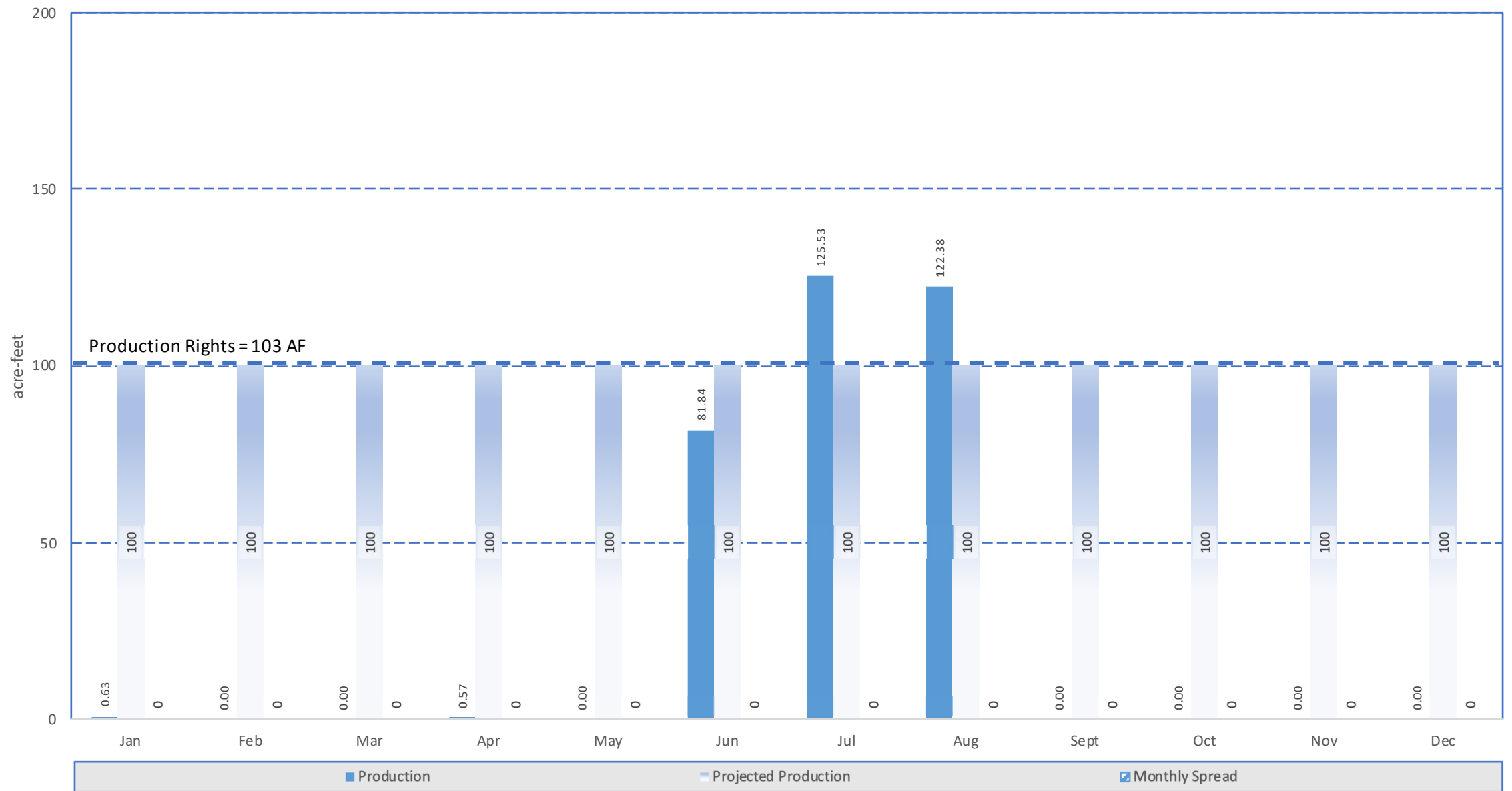
2021 Chino Basin Cumulative



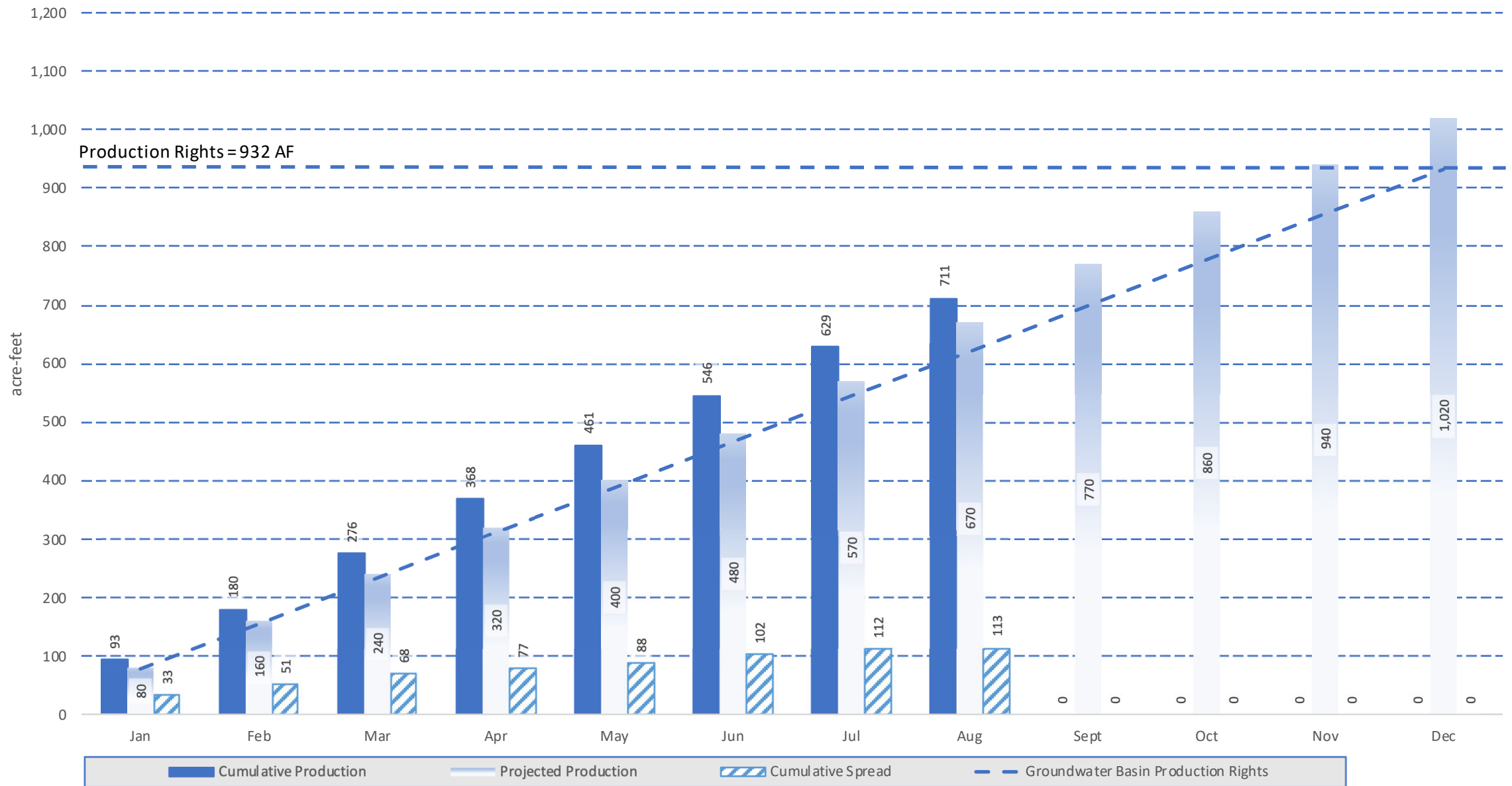
20-21 Chino Basin Cumulative



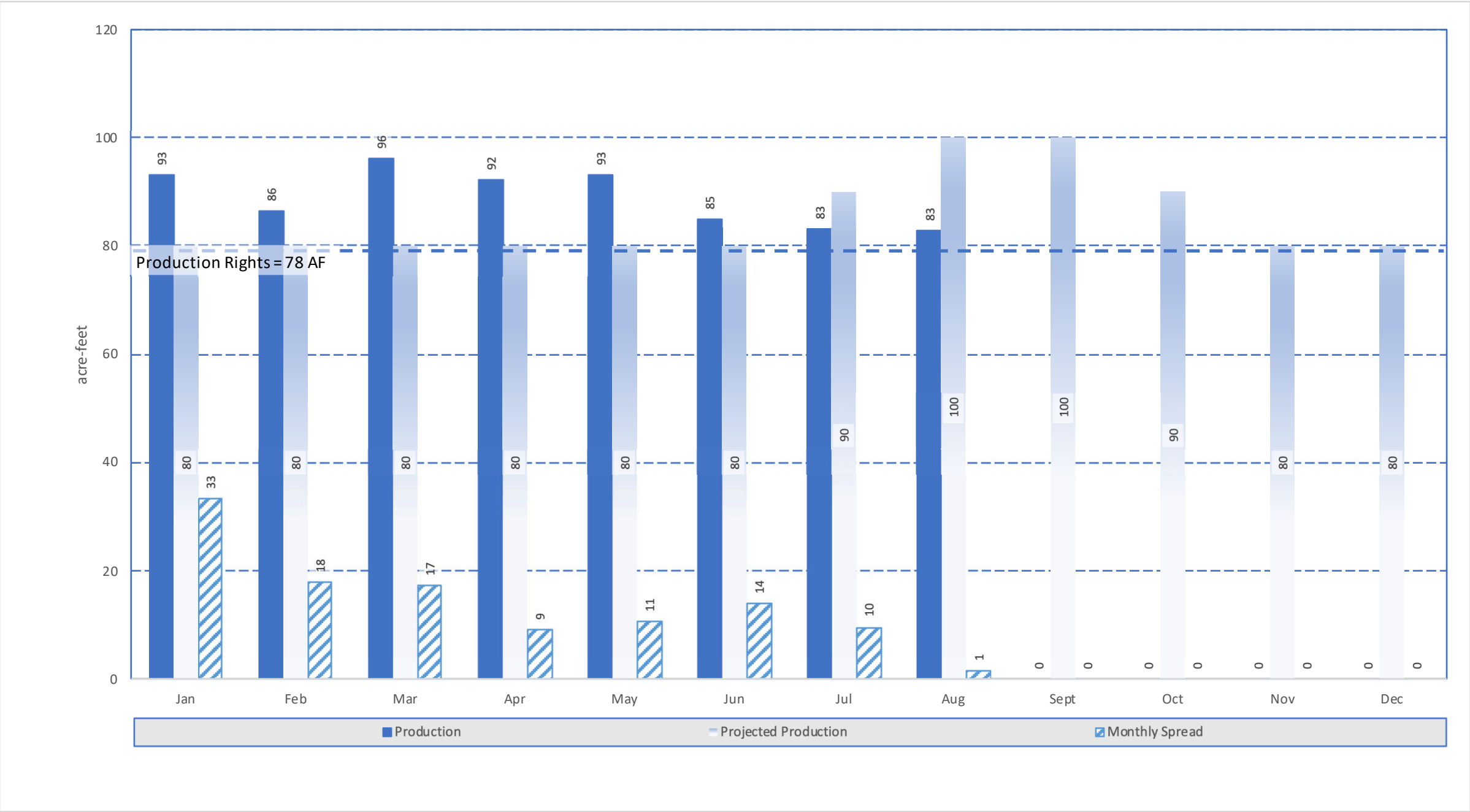
2021 Chino Basin Monthly



2021 Six Basins Cumulative



2021 Six Basins Monthly



August 2021 Monthly Waterscope Review Data

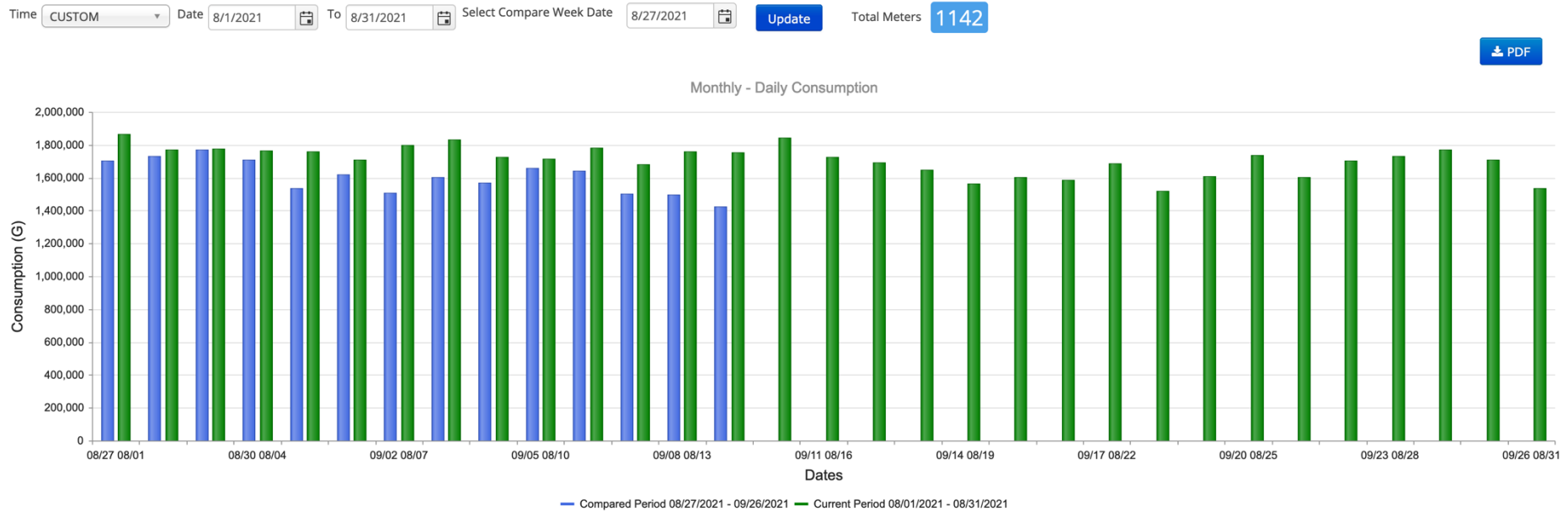


Figure 1 - Daily Consumption

All Installed Meters : 1212
52,967,040.89 G

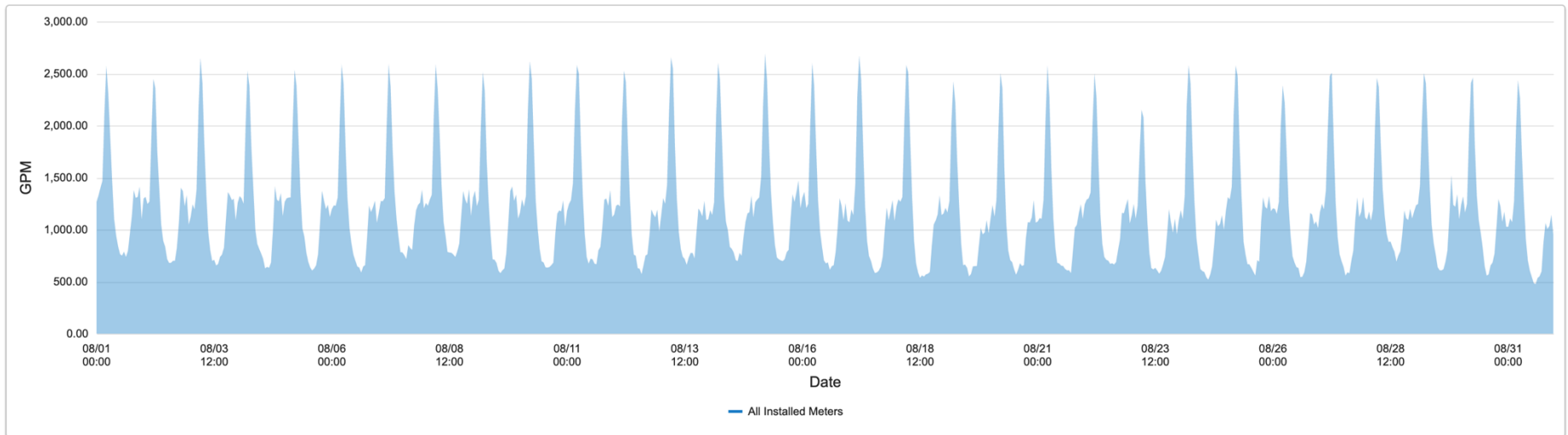


Figure 2 - Daily Usage

August 2021 Monthly Waterscope Review Data

Time Date To Graph Type Total Meters 1142

[PDF](#)

Consumption By Time

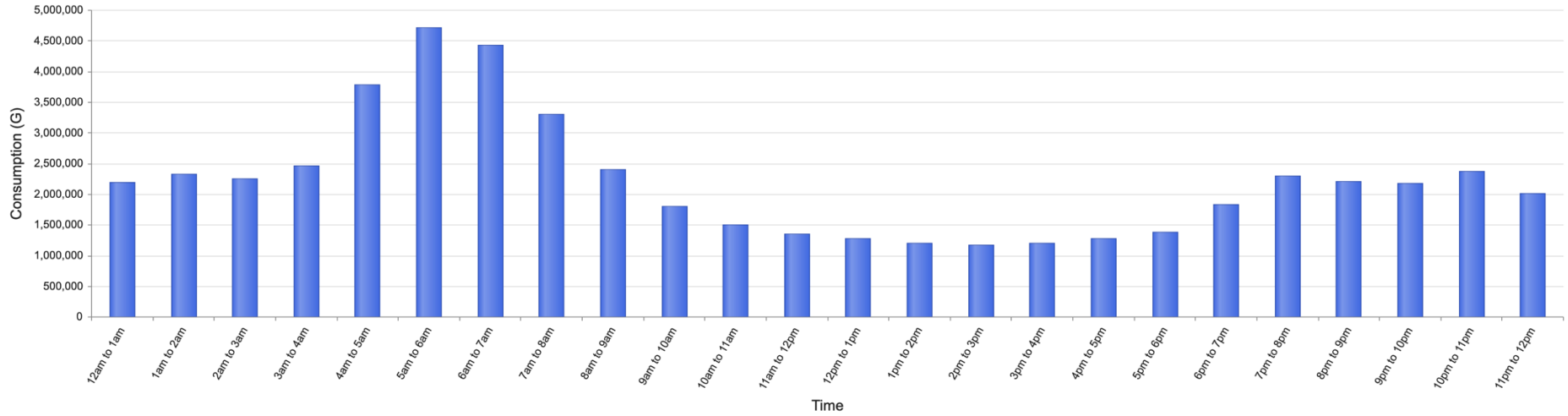




Figure 3 - Diurnal Curve

August 2021 Monthly Waterscope Review Data

Time: Date: To: Total Meters: **1142**

LEAK STATISTICS

Current Leak Statistics Date: 8/31/2021 12:00:00 AM Avg. Leak Rate: 0.38 GPM Leak Consumption: 210,588.58 G Daily Total Consumption: 1,538,197.18 G Total Leak Meters: 386		Leak (%) - of Total Consumption: 13.69 % 	Leak Conditions Threshold Leak: 112 Leak: 274 Intermittent Leak: 166 Percent Use: 711	Comparative Leak Statistics Date: <input type="text" value="8/1/2021"/> Avg. Leak Rate: 0.26 GPM Leak Consumption: 159,319.69 G Daily Total Consumption: 1,865,938.29 G Total Leak Meters: 419	Leak (%) - of Total Consumption: 8.54 % 	Leak Conditions Threshold Leak: 110 Leak: 309 Intermittent Leak: 206 Percent Use: 753
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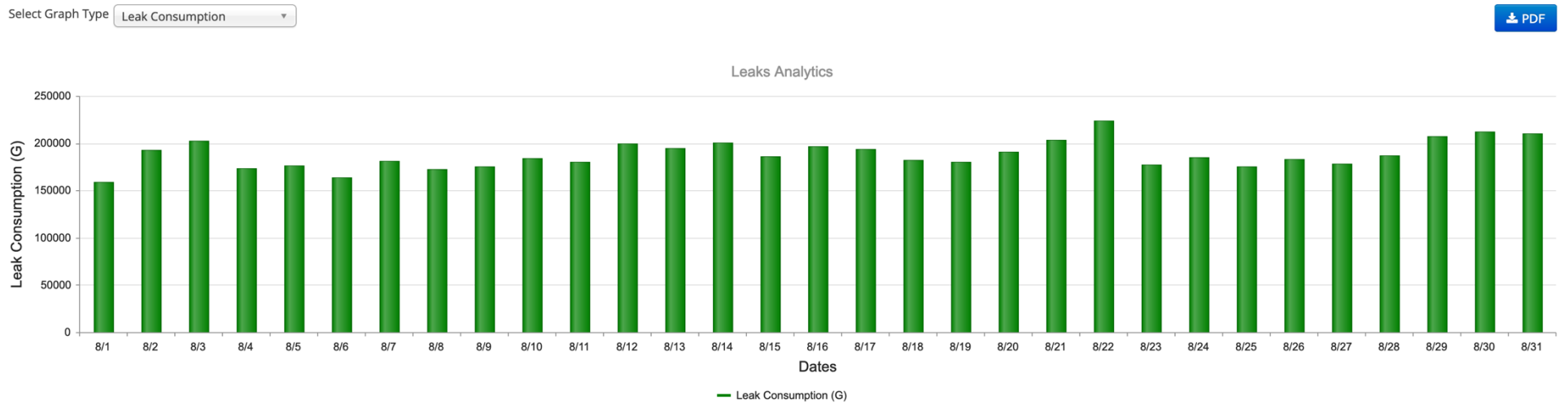


Figure 4 - Leak Analysis

Leak - The condition for a leak will trigger should a meter run constantly for 24 consecutive hours. If the Water Scope program recognizes one 5-minute interval with zero consumption, a new 24-hour monitoring cycle is started.

Threshold Leak - The threshold leak condition is triggered like a normal leak but depending on meter size a threshold or minimum flow rate must be maintained over the 24-hour period. As with leaks, dropping below the threshold for 5 minutes will reset the 24-hour interval.

Intermittent Leak - This condition will identify start/stop leaks such as faulty toilet flappers. It looks at an intermittent, continuous flow between two flow rates over a specified period. The reason for the low and high thresholds is to eliminate continuous 24-hour leaks and irrigation systems from triggering the flag.

A. Water Supply through May 2021

- Annual entitlement for CY2021 is 13,000 AF
 - Cumulative yearly production was 8,369 AF
 - Cumulative yearly consumption was 7,772 AF
 - Cumulative yearly spread was 548 AF
 - Cumulative unaccounted water was 49 AF

Six Basins Production for 2021

- Annual production right is 932 AF.
- Cumulative production was 712 AF. Production is sent to the WFA treatment facility to meet City of Ontario and MVWD entitlement.
- The Company spread a total of 113 AF.

Cucamonga Basin Production for 2021

- Annual production right is 5,938 AF.
- Cumulative production was 4,676 AF.
- The Company spread a total of 435 AF.

Chino Basin Production for 2021

- Annual production right is 1,232 AF.
- Cumulative production was 331 AF.
- The Company spread a total of 0 AF.

Surface Water (San Antonio Creek) flow for 2021

Total flow was 1,256 AF.

Tunnel flow for 2021

San Antonio Tunnel flow was 1,391AF.
Frankish and Stamm Tunnel flow was 0 AF.

B. Company Stock

0.25 share of water stock moved from active to dormant and 0.50 share from dormant to active this transfer period.

C. Communication and Information Activities

"Facebook" - 179 friends liking our old FB page and 71 customers have liked our new FB page. No new communication posted on the new page and no new communication on the old Facebook page. Facebook is not able to merge the two Facebook pages; therefore, we are in discussion of possibly deleting the old page.

D. Administration Matters

Meetings of interest:

- Thu, Aug 19 - GM attended CBWM AP Confidential Session
- Wed, Aug 25 - GM attended Water Manager's Meeting at IEUA
- Thu, Aug 26 - GM attended CBWM AP Confidential Session
- Tue, Sept 7 - GM attended IEUA Facility Tour
- Wed, Sept 8 - GM participated in Director tour of Company facilities
- Thu, Sept 9 - GM attended CBWM AP Confidential Session

E. Groundwater Basin Matters

Chino Basin -

Spread Water from SAWCo

Application to spread 1,500 AF per year for years 21/22 through 25/26 was approved by WM Board in July. We have not yet spread any water in 2021.

Ag Pool Contest and Legal Expenses – In May 2017 the Agricultural Pool initiated adversarial proceedings contesting Appropriative Pool storage within the Chino Basin.

The Appropriative Pool has objected to those costs being ‘expenses’ as defined by the Peace Agreement. The courts agreed with the AP.

AP Leadership continues attempting to negotiate a solution with AgP Leadership.

On July 26th the AgP filed a motion for Attorney’s Fees of about half a million dollars. The court had set that day as a deadline for the filing and absent a settlement the AgP had little choice but to file.

Six Basins –

A meeting was held on August 25, 2021. The Watermaster Board addressed the following:

- The Board approved agreement for legal services with Richards, Watson, and Gershon.
- The Board reviewed the amendment to the Old Baldy Agreement between the City of La Verne and Puente Basin Water Agency

The next meeting is scheduled for September 22nd.

Cucamonga Basin –

The working group met virtually on September 7th.

CVWD is still working to get Basin Model data from West Yost.

An addendum to the Request for Proposal was discussed and feedback was given by all the parties. No change to the current schedule was made. Proposals are due October 12th.

There’s been on-going discussion regarding a possible development near the Sycamore Inn.

The next scheduled meeting is October 5th.

Agenda Item No. 4H

Item Title: Projects and Operations Update

Purpose:

To update the Board and Shareholders on Company capital projects.

Updates:

1507 – Office Relocation

Presentation to City of Upland originally scheduled for late September has been deferred at City Manager’s request.

1602 – Holly Drive Reservoir, Phase 2

~~A modified and reduced project was awarded to Paso Robles Tanks on September 15. Contract has been fully executed. Preconstruction meeting held. Material submittal process initiated. Construction of the tank has been completed.~~

~~The remaining civil portion of the contract was awarded at the March Board Meeting. Civil work was completed in March/April.~~

~~Disinfection completed. State permit granted. Tank is now in service. Project is complete except for the final paperwork.~~

Original Budget	\$477,000
Original Contracts	\$862,130
Civil Contract	\$149,985
Authorized Change Orders	\$389,096
Current Contract w/ Civil	\$1,172,611

1901 – Automated Meter Reading (AMR)

All domestic meters have been installed. Field staff has verified each meter installation and is working to fix minor leaks at some meter threads.

~~Residential meters have been installed.~~ Not unexpected, but about 80 meters are having cellular connection issues. We are working to improve reception by coordinating with cellular carrier, alternate meter antennas or switching cellular carriers.

Original Budget	\$770,000
Original Contracts	\$731,220
Authorized Change Orders	8,000
Current Contracts	\$739,220

1902 – Cucamonga Crosswalls Mitigation

County has retained GRB, our contractor for the crosswall work, to process spoils behind the Cucamonga Dam. The state Division of Safety of Dams has requested that the County ‘muck out’ behind the dam to regain lost storage. Staff has asked GRB to assist in site clean-up while they have the equipment in operation.

1905 – 2020 Master Plan

Computer Water Model being constructed by consultant. Staff is coordinating with consultant regarding areas of concern in the water model to improve accuracy. Revised schedule is to complete Master Plan by end of the year.

Original Budget	\$240,000
Original Contracts	\$204,085
Authorized Change Orders	NA
Current Contracts	\$204,085

2007 Well 19

Staff is working on a Request for Proposals to construct a new Well 19. RFP should be released next year for consideration by the Board.

2101 Booster 17 (V Screen) Generator

Purchase Order has been submitted. Waiting on delivery.

Original Budget	\$18,000
Original Contracts	\$14,510
Authorized Change Orders	NA
Current Contracts	\$14,510

2102 Shaft 6 Generator

Purchase Order has been submitted. Waiting on delivery.

Original Budget	\$8,000
Original Contracts	\$6,436
Authorized Change Orders	NA
Current Contracts	\$6,436

2103 Booster 19 (Holly Drive) Generator

Purchase Order has been submitted. Generator has been delivered. Contractor is currently working on concrete pad for generator installation. Natural gas line and service is currently being installed. Staff ~~is working to secure~~ has secured county permit for gas lateral installation.

Original Budget	\$75,000
Original Contracts	\$61,366
Authorized Change Orders	NA
Current Contracts	\$61,366

2105 Urban Water Management Plan

Contract was awarded at the March 2021 Board Meeting. Staff and consultant are exchanging and reviewing data. ~~Draft UWMP scheduled for delivery next week. Aiming for a public hearing at the September Board Meeting.~~

Original Budget	\$60,000
Original Contracts	\$48,780
Authorized Change Orders	NA
Current Contracts	\$48,780

2107 Risk and Resiliency Assessment of SCADA system

Company has contracted a detailed study to find and eliminate openings in our SCADA system to reduce risk of outside attacks.

Original Budget	\$15,000
Original Contracts	\$12,000
Authorized Change Orders	NA
Current Contracts	\$12,000

2108 Demolition of abandoned booster stations 5 and 15

Contract with CP Construction was awarded at the May Board Meeting. City has agreed to waive permit fees in exchange for quit claim of park land.

Both facilities have been demolished. ~~Staff is cleaning up remainder fencing and debris at Station 15.~~ Staff to start work on quitclaim of park property to the City.

Original Budget	\$100,000
Original Contracts	\$80,000
Authorized Change Orders	NA
Current Contracts	\$80,000

2111 AWIA Emergency Response Plan

Federal Government mandated report. Contract with WSC was awarded at the July Board Meeting. Deadline to submit ERP is December 31, 2021.

Original Budget	\$36,000
Original Contracts	\$33,530
Authorized Change Orders	NA
Current Contracts	\$33,530

Agenda Item 6

Item Title:

Public Hearing and Consideration to Adopt Resolution No. 2021-09-01 for the 2020 Urban Water Management Plan (UWMP)

Purpose:

To hold a public hearing and consider adoption of the 2020 Urban Water Management Plan.

Issue:

Is the Board satisfied with the information and public comments as presented in the Urban Water Management Plan?

Manager's Recommendation:

Adopt Resolution No. 2021-09-01 adopting the 2020 Urban Water Management plan.

Background:

By California law, Urban Water Management Plans are prepared every five years by urban water suppliers. After a public hearing and adoption, the plan is submitted to the California Department of Water Resources.

The intent is to assist supporting long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. These assessments are included in its UWMP and are prepared every 5 years.

The Company adopted its first Urban Water Management Plan in 2006.

Impact on the Budget:

none

Previous Actions:

The Board adopted the 2015 UWMP on June 21, 2016

The Board awarded a not-to-exceed \$46,930 contract to WSC on March 16, 2021, to complete the UWMP.

RESOLUTION No. 2021-09-01
A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
SAN ANTONIO WATER COMPANY ADOPTING THE 2020 URBAN WATER
MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objectives of which are to verify the adequacy and reliability of existing and planned sources of water supply and to plan for the conservation and efficient use of water; and

WHEREAS, the San Antonio Water Company (Water Company) supplies domestic and irrigation shareholders;

WHEREAS, the Water Company provides 10% of its supply to domestic shareholders in the San Antonio Heights; 7% to shareholders outside of San Antonio Heights for irrigation, agricultural and industrial purposes; and 80% to Municipal water districts at wholesale. Inactive shareholders represent approximately 3%;

WHEREAS, the 2020 Urban Water Management Plan (UWMP) identifies the Water Company as a wholesaler; and

WHEREAS, the Board recognizes that this document is a useful planning document that will be periodically reviewed at least once every five years in conjunction with the update of the Water Master Plan and shall make amendments or changes to its plan indicated by the review; and

WHEREAS, the plan must be adopted after public review and hearing, and filed with the California State Library and the California Department of Water Resources within thirty days of adoption; and

WHEREAS, the Water Company has therefore, prepared and circulated for public review a draft of the UWMP, and a properly noticed public hearing regarding said Plan was held by the Board of Directors of the Water Company on September 21, 2021.

WHEREAS, SAWCo did prepare and shall file said Plan with the California State Library and the California Department of Water Resources; and

NOW THEREFORE, BE IT RESOLVED by the Board of Directors of the San Antonio Water Company that the 2020 Urban Water management Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2020 Urban Water Management Plan with the California State Library and the California Department of Water Resources within 30 days of this date.

This Resolution was passed and adopted on the 21st day of September 2021.

Tom Thomas, President
San Antonio Water Company

Attest:

Martha Goss, Secretary
San Antonio Water Company



Urban Water Management Plan

Public Review Draft

SEPTEMBER 2021

SAN ANTONIO WATER COMPANY

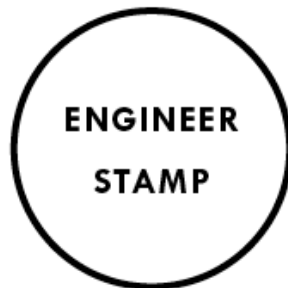




SAN ANTONIO WATER COMPANY

Public Review Draft Urban Water Management Plan

SEPTEMBER 2021



Prepared by Water Systems Consulting, Inc.



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ACRONYMS & ABBREVIATIONS

°C	Degrees Celsius
°F	Degrees Fahrenheit
AB	Assembly Bill
AF	Acre Foot
AFY	Acre Feet per Year
AHHG	Area of Historic High Groundwater
AMR	Automatic Meter Reader
APA	Administrative Procedures Act
AWWA	American Water Works Association
BMP	Best Management Practice
CALWARN	California Water/Wastewater Agency Response Network
CAT	Climate Action Team
CCF	Hundred Cubic Feet
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFS	Cubic Feet per Second
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Irrigation System
CUWCC	California Urban Water Conservation Council
DCR	DWR SWP Delivery Capacity Report
DDW	SWRCB Division of Drinking Water
DFW	California Department of Fish and Wildlife
DIP	Ductile Iron Pipe
DMM	Demand Management Measure
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ERNIE	Emergency Response Network of the Inland Empire
ESA	Endangered Species Act
ET	Evapotranspiration
ETo	Reference Evapotranspiration

GAC	Granulated Activated Carbon
GIS	Geographic Information System
GPCD	Gallons per Capita per Day
GPM	Gallons per Minute
HECW	High Efficiency Clothes Washer
HET	High Efficiency Toilet
IX	Ion Exchange
KAF	Thousand Acre Feet
KAFY	Thousand Acre Feet per Year
LAFCO	Local Agency Formation Commission
MAF	Million Acre-Feet
MCL	Maximum Contaminant Level
MF	Multi-family
MG	Million Gallons
MGD	Million Gallons per Day
MOU	Memorandum of Understanding
MSL	Mean Sea Level
MTBE	Methyl Tertiary Butyl Ether
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PCE	Perchloroethylene
PVC	Polyvinyl Chloride
QWEZ	Qualified Water Efficient Landscaper
RIX	Rapid Infiltration and Extraction
RPA	Reasonable and Prudent Alternative
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SAWCo	San Antonio Water Company
SBX7-7	Senate Bill 7 of Special Extended Session 7
SF	Single Family
SOI	Sphere of Influence
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TCE	Trichloroethylene
ULFT	Ultra-Low Flush Toilet

UV	Ultraviolet
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act
VOC	Volatile Organic Compound
WBIC	Weather Based Irrigation Controller
WSCP	Water Shortage Contingency Plan
WFF	Water Filtration Facility
WSS	Water Sense Specification
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

1

2020 URBAN WATER MANAGEMENT PLAN

Introduction and Lay Description

This chapter provides a brief overview of the San Antonio Water Company (SAWCo) and the purpose of this Urban Water Management Plan (UWMP).

SAWCo is a private non-profit Mutual Water Company formed in 1882 under the General Corporation Laws of the United States with the purpose to furnish, lease, or sell water for irrigation, milling, manufacturing and other purposes to the newly established Ontario irrigation colony. Land for the irrigation colony was sold primarily for the booming citrus industry at the time, and a share in SAWCo was included with every acre of land purchased. Each shareholder was entitled to a portion of available local water, distributed equally by SAWCo amongst shareholders on a non-profit basis. Today SAWCo retains the same purpose of providing beneficial water service to all shareholders based on established monthly entitlements and a fixed number of shares.

IN THIS SECTION

- California Water Code
- UWMP Organization
- UWMP Relation to Other Efforts

1.1 The California Water Code

In 1983, the State of California Legislature (Legislature) enacted the Urban Water Management Planning Act (UWMP Act). The law required an urban water supplier, providing water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet (AF) annually, to adopt an UWMP every five years demonstrating water supply reliability under normal as well as drought conditions.

Since the original UWMP Act was passed, it has undergone significant expansion, particularly since the completion of the 2015 UWMP. Prolonged droughts, groundwater overdraft, regulatory revisions, and changing climatic conditions affect the reliability of water suppliers as well as the statewide water reliability overseen by California Department of Water Resources (DWR), the State Water Resources Control Board (State Water Board), and the Legislature. Accordingly, the UWMP Act has grown to address changing conditions and the current requirements are found in Sections 10610-10656 and 10608 of the California Water Code.

DWR provides guidance for urban water suppliers by preparing an Urban Water Management Plan Guidebook 2020 (Guidebook) (California Department of Water Resources, 2021), conducting workshops, developing tools, and providing program staff to help water suppliers prepare comprehensive and useful UWMPs, implement water conservation programs, and understand the requirements in the California Water Code. Suppliers prepare their own UWMPs in accordance with the requirements and submit them to DWR. DWR then reviews the plans to make sure they have addressed the requirements identified in the California Water Code and submits a report to the Legislature summarizing the status of the plans for each five-year cycle.

The purpose of the UWMP is for water suppliers to evaluate their long-term resource planning and establish management measures to ensure adequate water supplies are available to meet existing and future demands. The UWMP provides a framework to help water suppliers maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during drought conditions or other water supply interruptions.

The UWMP is a valuable planning tool used for multiple purposes including:

- Provides a standardized methodology for water utilities to assess their water resource needs and availability.
- Serves as a resource to the community and other interested parties regarding water supply and demand, conservation and other water related information.
- Provides a key source of information for cities and counties when considering approval of proposed new developments and preparing regional long-range planning documents such as city and county General Plans.
- Informs other regional water planning efforts.

This plan, which was prepared in compliance with the California Water Code, and as set forth in the Guidebook and format established by the DWR, constitutes the 2020 UWMP for SAWCo.

1.2 UWMP Organization and Lay Description

This UWMP is organized as follows:

Chapter 1 – Introduction

The introduction provides a description of SAWCo and background on the UWMP and California Water Code. Water suppliers that serve more than 3,000 customers or 3,000 acre-feet-per-year (AFY) are required to prepare a UWMP. The UWMP is an important tool that details SAWCo's system and service area, estimates supply and demand over a twenty-five-year period, and analyzes reliability in terms of drought.

Chapter 2 – Plan Preparation

The UWMP is prepared based on guidance from DWR. This UWMP provides information in terms of calendar year (January 1st – December 31st) and in units of AFY. While preparing this UWMP, SAWCo coordinated with other local agencies and sent notifications that the UWMP was being developed, available for review, and details pertaining to the public hearing and plan adoption meeting.

Chapter 3 – System Description

This chapter summarizes SAWCo's service area, climate, demographics, and land use. SAWCo provides domestic service to the San Antonio Heights community with an estimated population of 3,000 people. SAWCo provides water based on entitlement and the number of shares. There are 6,389 shares in SAWCo. In 2020, only 6,178 shares were active.

Chapter 4 – Water Use Characterization

This chapter summarizes historical and future water use. SAWCo provides water for domestic, municipal, and miscellaneous uses. In addition, SAWCo spreads water in the Chino, Cucamonga, and Six Basins groundwater basins for groundwater recharge. In 2020, the largest customer was the City of Upland's purchases for irrigation water, which accounted for 50% of the total water sales.

SAWCo's Basic Area is nearly built out. SAWCo's ongoing Master Plan effort identified seven parcels as possible future development and corresponding water demand factors. Using the information developed in the Master Plan, it is estimated that should these seven parcels develop, future demands on SAWCo will increase by approximately 30 AFY.

Chapter 5 – Water Supply Characterization

SAWCo uses local groundwater from several groundwater basins and surface water to meet customer demands. Local groundwater is extracted from the Chino Basin, Cucamonga Basin, and Six Basins. The three groundwater basins are each adjudicated, and SAWCo's has water rights as defined by the various legal Judgements in place to protect and manage each basin. SAWCo also participates in groundwater recharge operations that enhance groundwater supply. Surface water from San Antonio Creek are pre-1914 water rights, and annual water availability is influenced by rainfall. The San Antonio Tunnel is a deep rock tunnel 100 feet below ground surface that collects naturally percolated groundwater.

Chapter 6 – Water Service Reliability and Drought Risk Assessment

Future demand and supply were analyzed to evaluate supply reliability over the planning period. The UWMP analyzed conditions for normal, or average, single-dry, and five-year consecutive dry periods. SAWCo aims to provide shareholders full entitlement, but in periods of drought, allocations per share may be reduced, depending on supply availability. In all scenarios, SAWCo expects to meet customer

demands based on shareholders full entitlement. In addition, a Drought Risk Assessment was performed to analyze anticipated supply and demand for the next five years (2021-2025). The Drought Risk Assessment analysis determines that SAWCo's supplies are able to reliably meet customer demands.

Chapter 7 – Water Shortage Contingency Plan

The Water Shortage Contingency Plan (WSCP) provides guidance on declaring a water shortage stage and how to mitigate supply deficits. The WSCP defines four stages of water shortage and outlines the actions that will be required of customers during each stage. The complete WSCP is available in Appendix H.

Chapter 8 – Demand Management Measures

This chapter summarizes the various demand management measures used to implement water conservation throughout SAWCo. To participate in any of the rebate programs, interested customers should contact SAWCo directly.

Chapter 9 – Plan Adoption, Submittal, and Implementation

This chapter summarizes the various requirements to adopt and submit a UWMP and WSCP. Details on public hearing dates, notification letters to local agencies, and how to submit or amend a plan are discussed.

1.3 UWMP Relation to Other Efforts

The UWMP characterizes water use, estimates future demands and supply sources, and evaluates supply reliability for normal, single-dry, and consecutive dry years. The UWMP Act also requires reevaluation of SAWCo's Water Shortage Contingency Plan (WSCP). Details on the WSCP are provided in Chapter 7.

Documents that were leveraged in preparation of this UWMP and how they overlap with the primary topics included in the UWMP are shown in Figure 1-1.






			PLAN TOPICS				
							
PLANNING DOCUMENT	PREPARED BY	DOCUMENT STATUS	SUPPLIES / RELIABILITY	DEMANDS / WATER USE EFFICIENCY	INFRASTRUCTURE	RISK & MITIGATION	EMERGENCY RESPONSE
Water Master Plan	WSC for SAWCo	■■■□□ Under development	✓	✓	✓		
AWIA Risk and Resilience Assessment and Emergency Response Plan	WSC for SAWCo	■■■■■ Complete	✓		✓	✓	✓
2017 Water Master Plan	Civiltec Engineering, Inc for SAWCo	■■■■■ Complete	✓	✓	✓		
2017 Water Rate and Fee Study	Carollo Engineers for SAWCo	■■■■■ Complete		✓			
2015 Urban Water Management Plan	Civiltec Engineering, Inc for SAWCo	■■■■■ Complete	✓	✓		✓	✓

Figure 1-1. UWMP Relation to Other Planning Efforts.

2 2020 URBAN WATER MANAGEMENT PLAN

Plan Preparation

This plan was prepared using guidance from the Department of Water Resources' (DWR) Urban Water Management Plan Guidebook 2020 (2020 UWMP Guidebook). This chapter provides details regarding SAWCo's UWMP preparation and the coordination and outreach efforts conducted.

A DWR review sheet checklist is provided in Appendix A.

2.1 Basis for Preparing a Plan

As mentioned in Chapter 1, the Water Code requires Suppliers with 3,000 or more service connections or water deliveries in excess of 3,000 AFY to prepare an UWMP every five years. Details pertaining to SAWCo's water system, such as public water system number, 2020 number of connections and volume of water supplied are provided in Table 2-1. In 2020, SAWCo delivered 16,345 AFY of water to nearly 1,210 service connections and in a wholesale capacity; therefore, SAWCo is required to prepare an UWMP. SAWCo included all 2020 data in the development of this UWMP.

IN THIS SECTION

- Basis for Preparing a Plan
- Coordination and Outreach

Table 2-1. DWR 2-2 Plan Identification

TYPE OF PLAN	MEMBER OF RUWMP	MEMBER OF REGIONAL ALLIANCE	NAME OF RUWMP OR REGIONAL ALLIANCE
Individual UWMP	No	No	

Table 2-2. DWR 2-3 Agency Identification

TYPE OF SUPPLIER	YEAR TYPE	FIRST DAY OF YEAR		UNIT TYPE
Wholesaler	Calendar Years	DD	MM	Acre Feet (AF)
		01	01	

2.2 Coordination and Outreach

The UWMP Act requires a water purveyor to coordinate the preparation of its UWMP with other appropriate agencies in and around its service area. This includes other water suppliers that share a common source, water management agencies, and relevant public agencies. All relevant entities, including the County of San Bernardino, were sent 60-day notices of preparation and consideration for adoption at a public hearing prior to the adoption of the 2020 UWMP. Copies of the letters and other correspondence are provided in Appendix B. Public hearing notices are also provided in Appendix B.

2.2.1 Wholesale and Retail Coordination

SAWCo provides water based on a fixed number of shares. Several local water suppliers own shares in SAWCo and are listed in Table 2-3.

Table 2-3. DWR 2-4W Water Supplier Information Exchange

Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with Water Code Section 10631. Complete the table below.

WHOLESALE WATER SUPPLIER NAME
Cucamonga Valley Water District
Monte Vista Water District
City of Ontario
City of Upland

2.2.2 Coordination with Other Agencies and the Community

CWC Section 10621 requires that suppliers notify cities and counties to which they serve water that the UWMP and WSCP are being updated. Notices should be provided at least 60 days prior to a public hearing. To fulfill this requirement, SAWCo notified local and regional agencies of preparation of its 2020 UWMP and WSCP, inviting these agencies to submit any comments. SAWCo provided notices to the agencies listed in Table 2-4.

Table 2-4. Agency Coordination.

AGENCY/ORGANIZATION	WAS NOTIFIED OF PLAN AVAILABILITY ¹	WAS SENT A NOTICE OF INTENTION TO ADOPT 60 DAYS PRIOR TO PUBLIC HEARING
Water Suppliers		
Cucamonga Valley Water District	X	X
Monte Vista Water District	X	X
Public Agencies		
City of Upland	X	X
City of Ontario	X	X
City of Pomona	X	X
County of San Bernardino	X	X
Others		
Chino Basin Watermaster	X	X

¹Was notified of availability of Draft UWMP and directed to an electronic copy of the draft plan on SAWCo's website.

3 2020 URBAN WATER MANAGMENT PLAN

System Description

This section will describe SAWCo’s service area, climate, population, demographics, and land uses.

SAWCo is governed by a seven-person Board of Directors elected to four-year terms. Daily operations are overseen by the General Manager with support by the Assistant General Manager and Water Utility Superintendent. SAWCo employs approximately 10 staff members to manage operational and administrative services.

SAWCo is governed by bylaws. The purpose of SAWCo is to develop, distribute, supply, and deliver water to its shareholders for irrigation, domestic, and all other useful purposes, in proportion to the number of shares of stock held by them respectively, at actual cost, and is not organized for the private gain of any person (San Antonio Water Company).

SAWCo contains a fixed number of shares at 6,389 shares. In 2020, 6,178 shares were actively taking water. Water is provided based on entitlement and the number of shares a customer holds. Shares may be divided or sold. In 2020, the total yearly entitlement was 13,000 AF; the yearly entitlement per share was equal to 2.03 AF/share.

IN THIS SECTION

- Service Area
- Climate
- Population and Demographics
- Land Uses

3.1 Service Area

SAWCo's bylaws specify the service area is made up of a Basic Area and an Extended Area. The Basic Area generally coincides with the incorporated community of San Antonio Heights located north of the City of Upland in San Bernardino County, as shown in Figure 3-1. The Basic Area is bounded to the south by the City of Upland, to the north by the San Bernardino Mountains, to the west by the Los Angeles County Line and to the east by Cucamonga Creek. SAWCo provides retail service to all end users who reside in the Basic Area.

The Extended Area is identified as all lands not included in the Basic Area. Customers within the Extended Area are considered wholesale shareholders. There are however a limited number of retail customers in the Extended Area including the Upland Hills Golf course, the Red Hill Golf Course, Holliday Rock Company, and several grove irrigators.

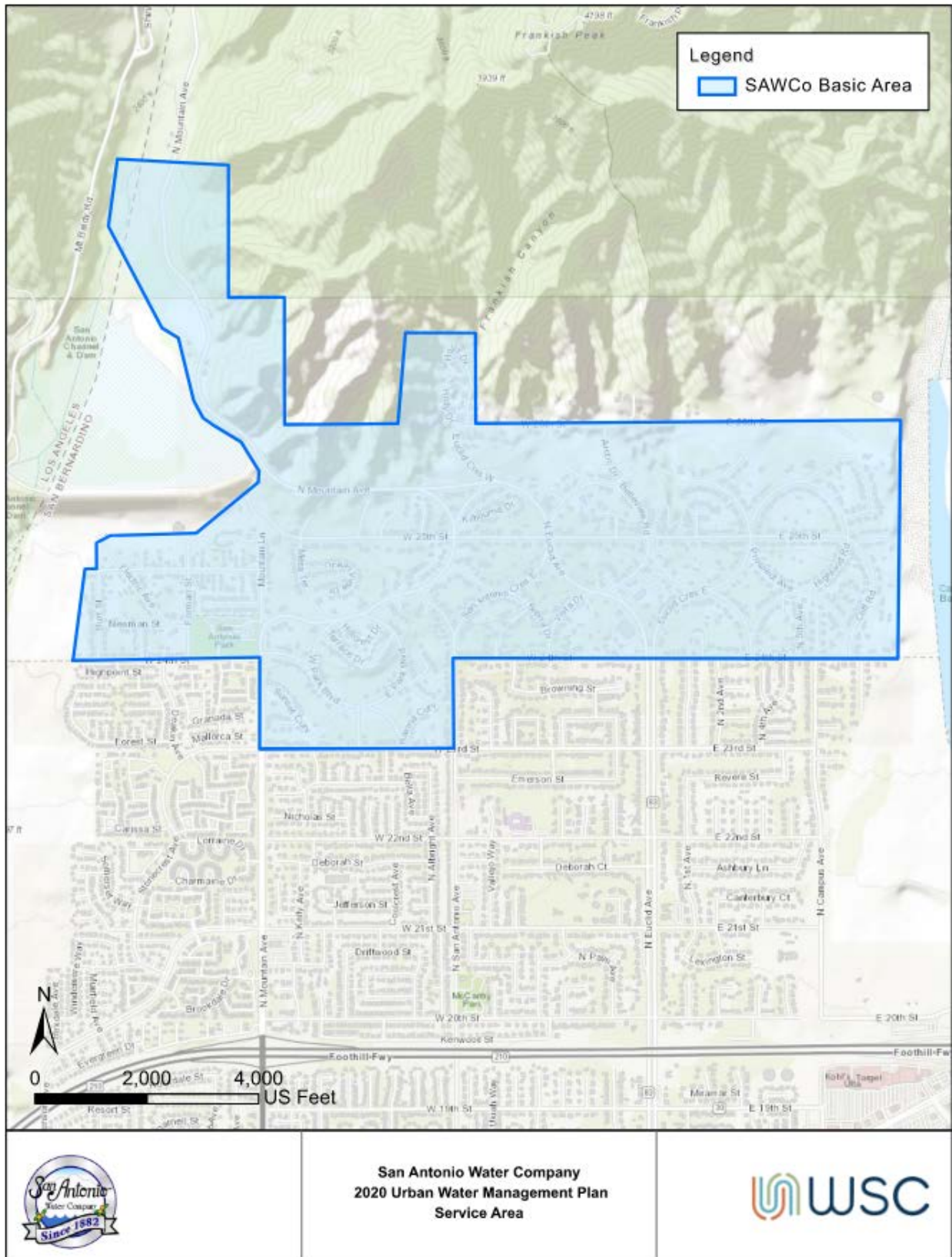


Figure 3-1. Service Area

3.2 Service Area Climate

Table 3-1 presents average climate data for the service area, including temperature, rainfall, and reference evapotranspiration (ET_o) from the California Irrigation Management Information System (CIMIS). CIMIS data was used as it provided the most recent data pertaining to temperature, rainfall, and ET_o. As shown in

Table 3-1, the warmest month of the year is typically August with an average temperature of 82.4 degrees Fahrenheit (°F), while the coldest month of the year is December with an average temperature of 58.5°F.

The annual average precipitation within SAWCo's service area is about 15.6 inches. As shown in Table 3-1, the majority of rainfall occurs in the months of October through March. December is typically the wettest month with an average rainfall of approximately 3.9 inches.

Table 3-1. Average Climate ¹

MONTH	AVERAGE TEMPERATURE (°F)	AVERAGE RAINFALL (INCH)	AVERAGE STANDARD ET _o (INCH)
January	59.9	2.8	2.2
February	60.5	2.1	2.8
March	63.8	1.9	4.3
April	67.0	0.9	5.4
May	69.8	0.4	5.8
June	75.8	0.1	6.6
July	81.2	0.2	7.5
August	82.4	0.0	7.3
September	80.1	0.5	5.6
October	73.5	1.3	4.0
November	65.0	1.6	2.7
December	58.5	3.9	2.0
ANNUAL AVERAGE	69.8	15.6 ²	4.7

¹ Data based on CIMIS weather station 78 Pomona; <https://cimis.water.ca.gov/>. Averages calculated from 2010-2020 data.

² Annual total rainfall.

3.3 Service Area Population and Demographics

3.3.1 Service Area Population

SAWCo’s Basic Service Area closely follows the boundaries of the census designated place of San Antonio Heights, which had a population of 3,092 in 2017, down from 3,371 in 2010 per the US Census (Datausa.io, 2017). To identify the population for 2020, the DWR population tool was used. Using a persons per connection factor of 2.73, it was estimated that the population within the Basic Area is 3,303 people.

San Antonio Heights is primarily residential and nearly built out. SAWCo has identified seven parcels that could potentially be developed and require water service. For this UWMP, it was assumed development would occur between 2025 and 2030. Therefore, future population was determined to increase to 3,322 people and remain constant throughout the planning horizon.

$$Future\ population = 2020\ population + 2.73 \frac{persons}{connection} * 7\ future\ connections = 3,322\ people$$

SAWCo also provides water for irrigation, industrial, agricultural, and wholesale in the Extended Area. Land use and planning in the extended area is under the jurisdiction of numerous cities and San Bernardino County and is addressed in their respective UWMPs.

Table 3-2. DWR 3-1W Current and Projected Population

POPULATION SERVED	2020	2025	2030	2035	2040	2045
Basic Area - San Antonio Heights	3,303	3,303	3,322	3,322	3,322	3,322

3.3.2 Other Social, Economic, and Demographic Factors

Based on 2015-2019 data, the United States Census Bureau (Census) estimates that households within the San Antonio Heights are composed of 2.69 people per household and approximately 64% of households are composed of married-couples with families. The median age of a resident within the San Antonio Heights is approximately 48 years old. Based on 2015-2019 Census data, 95% of people 25 years or older had at least graduated from high school and 42% obtained a bachelor’s degree or higher. It was estimated that 5% of people did not complete high school.

Throughout the San Antonio Heights, approximately 58% of the working population (people ages 16 and over) were employed. Approximately 75% held a private wage or salary position, and 16% were employed by the federal, state, or local government. Educational services, health care and social assistance (30%) is the most common industry that San Antonio Heights residents work in, followed by a retail trade (14%). The median household income was \$91,897, while the median earnings for a full-time, year-round worker was \$78,071 (United States Census Bureau, n.d.).

It was estimated that 5.2% of people within the San Antonio Heights were in poverty. 1.8% of households participated in government programs, such as the Supplemental Nutrition Assistance Program (SNAP). Of the households that received SNAP, 100% had children under the age of 18 within the household (United States Census Bureau, n.d.).

Census data reported that of the people identifying as one race alone, 79.7% were White. Approximately 4.5% identified as two or more races. Of the total population, an estimated 60.3% identified as White non-Hispanic and 27.8% as Hispanic. It was estimated that 18.9% of people at least

5 years or older spoke a language other than English at home. In addition to English, Asian and Pacific Islander languages were the most common languages spoken by San Antonio Heights residents. 7.4% of people stated that they did not speak English “very well” (United States Census Bureau, n.d.).

3.4 Land Uses within Service Area

As mentioned, SAWCo provides potable water service to the Basic Area, which incorporates the community of San Antonio Heights. This area consists of residential users only. There are only seven parcels currently identified as undeveloped. If they are developed, single-family residences will be established. Therefore, both current and future land uses within SAWCo’s Basic Area is residential only.

4 2020 URBAN WATER MANAGEMENT PLAN

Water Use Characterization

SAWCo provides potable and non-potable water to customers within its service area.

SAWCo provides potable water to residents within the San Antonio Heights and on occasion, to the City of Upland. SAWCo provides non-potable water for irrigation to various local irrigators and other agencies, including the Cities of Upland and Ontario, Monte Vista Water District, and Cucamonga Valley Water District. Other large irrigation accounts include the Holiday Rock Company and Red Hill Golf Course and Homeowners Association.

SAWCo's bylaws outline the various water services provided, which include domestic, municipal, and miscellaneous uses, defined below (San Antonio Water Company):

Domestic: water treated by SAWCo and directly delivered to shareholders through SAWCo's distribution system.

Municipal: untreated water and delivered to shareholders who in turn treat the water for delivery of domestic, commercial, and other users through their delivery systems.

Miscellaneous: untreated water directly delivered to shareholders through SAWCo's distribution system for a variety of legal permissible uses, including farm irrigation, golf course watering, and rock company operations.

IN THIS SECTION

- Non-Potable vs. Potable Water Use
- Water Use by Sector

4.1 Non-Potable Versus Potable Water Use

As mentioned, SAWCo serves both potable and non-potable water. Potable water is provided to residents within the San Antonio Heights and to the City of Upland. Non-potable water used for irrigation is also provided to several local irrigators and other nearby agencies, as mentioned above. Based on data for 2016 through 2020, SAWCo’s average non-potable deliveries account for 84% of the total water provided by SAWCo.

4.2 Past, Current, and Projected Water Use by Sector

SAWCo has provided potable and non-potable water to its customers and will continue to do so in the future. Past deliveries are shown in Figure 4-1.

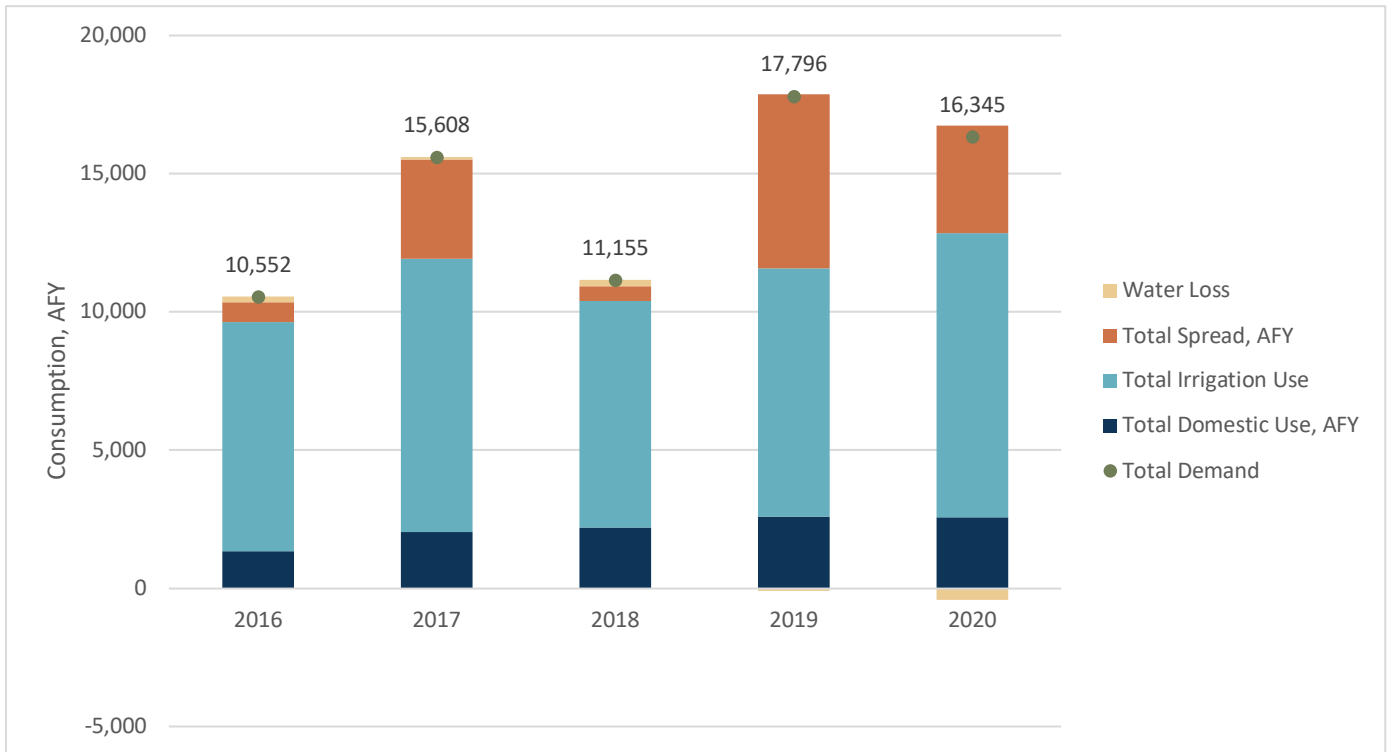


Figure 4-1. Water Demand for 2016-2020, AFY

4.2.1 Distribution System Water Losses

Over the last few years, SAWCo has focused on mitigating water losses. Based on historical data, it was clear that SAWCo experienced meter inaccuracies throughout the system. As shown above in Figure 4-1, SAWCo experienced negative water losses, meaning SAWCo sold more water than produced. As a result, the volume of 2020 actual water use shown in Table 4-1 differs from the total supply shown in Table 5-6.

Investigation helped SAWCo identify a substantial area of water losses, located at a flow meter at the Basin 6 settling ponds. In early 2021, SAWCo fixed this meter, and since then, water losses have

remained consistent. Based on data for January through April 2021, water losses have been recorded as 0.9% within the domestic system and 1% within the irrigation system.

In addition, SAWCo has replaced customer meters with Automated Meter Reading (AMR) to improve data collection and response.

4.2.2 Current Water Use

In 2020, SAWCo provided 16,746 AF of water to its customers or spread into groundwater storage. The City of Upland’s irrigation system consumed 50% of SAWCo’s total water produced. The second largest water use was for spreading, accounting for 23% of the total water produced. Potable deliveries for SAWCo’s domestic system within the San Antonio Heights accounted for 8%. A breakdown of water used in 2020 is provided in Figure 4-2.

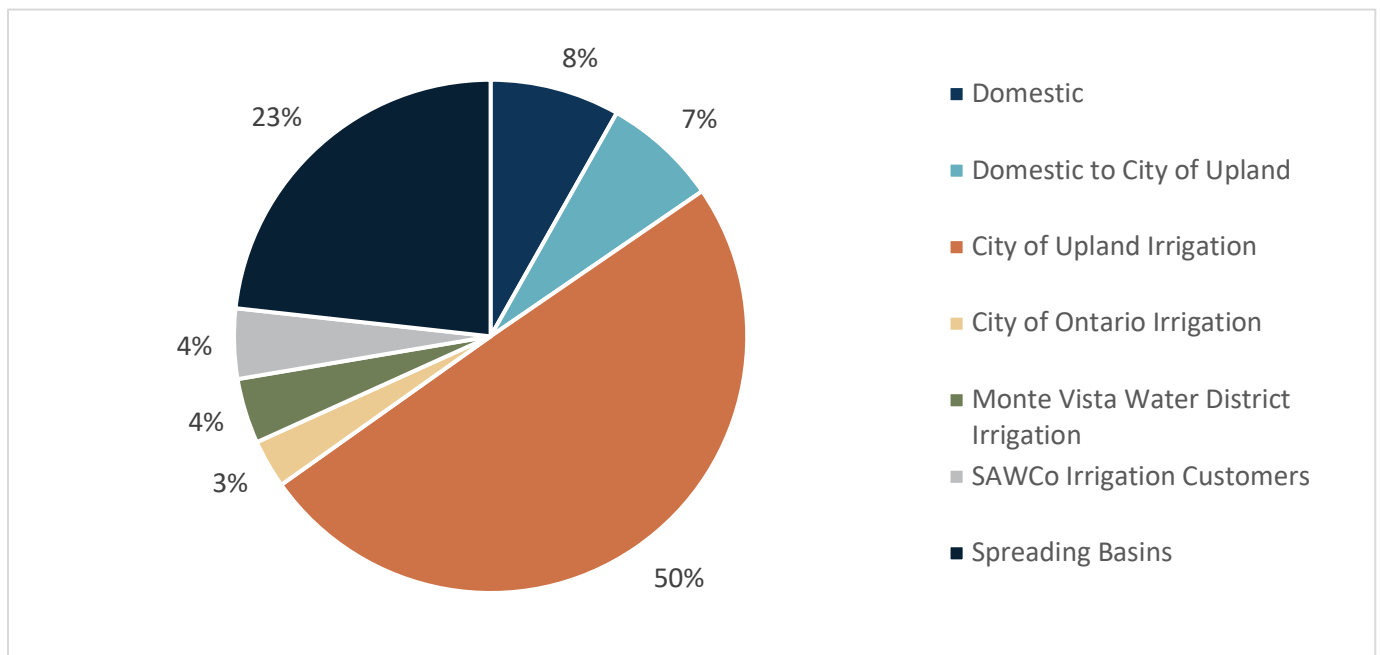


Figure 4-2. 2020 Water Use

Table 4-1. DWR 4-1W Actual Demands for Water, AFY

USE TYPE	ADDITIONAL DESCRIPTION	LEVEL OF TREATMENT WHEN DELIVERED	2020 VOLUME
Single Family	SAWCo Domestic Customers	Drinking Water	1,371
Sales/Transfers/Exchanges to Other Agencies	City of Upland	Drinking Water	1,213
Sales/Transfers/Exchanges to Other Agencies	City of Upland	Raw Water	8,332
Sales/Transfers/Exchanges to Other Agencies	Monte Vista Water District	Raw Water	687
Sales/Transfers/Exchanges to Other Agencies	City of Ontario	Raw Water	511
Landscape	Minor Irrigators	Raw Water	740
Groundwater Recharge	Spreading Basins	Raw Water	3,893
-		TOTAL:	16,747

4.2.3 Projected Water Use

SAWCo's system is very close to buildout and therefore, demands are expected to increase minimally. The majority of the San Antonio Heights area is already developed and any new development, should it occur, is expected along Holly Drive. These developments are anticipated to be single family residential and require potable service only.

Future demands were estimated as part of SAWCo's 2020 Master Plan, using a factor calculated from 2019 consumption and parcel acreage. This factor was applied to areas identified as possible development within the 2017 Water Master Plan and added to current demand to determine the total future demand for SAWCo's potable system. Areas for possible development are identified in Figure 4-3 below and corresponding demand for each parcel is summarized in Table 4-2.

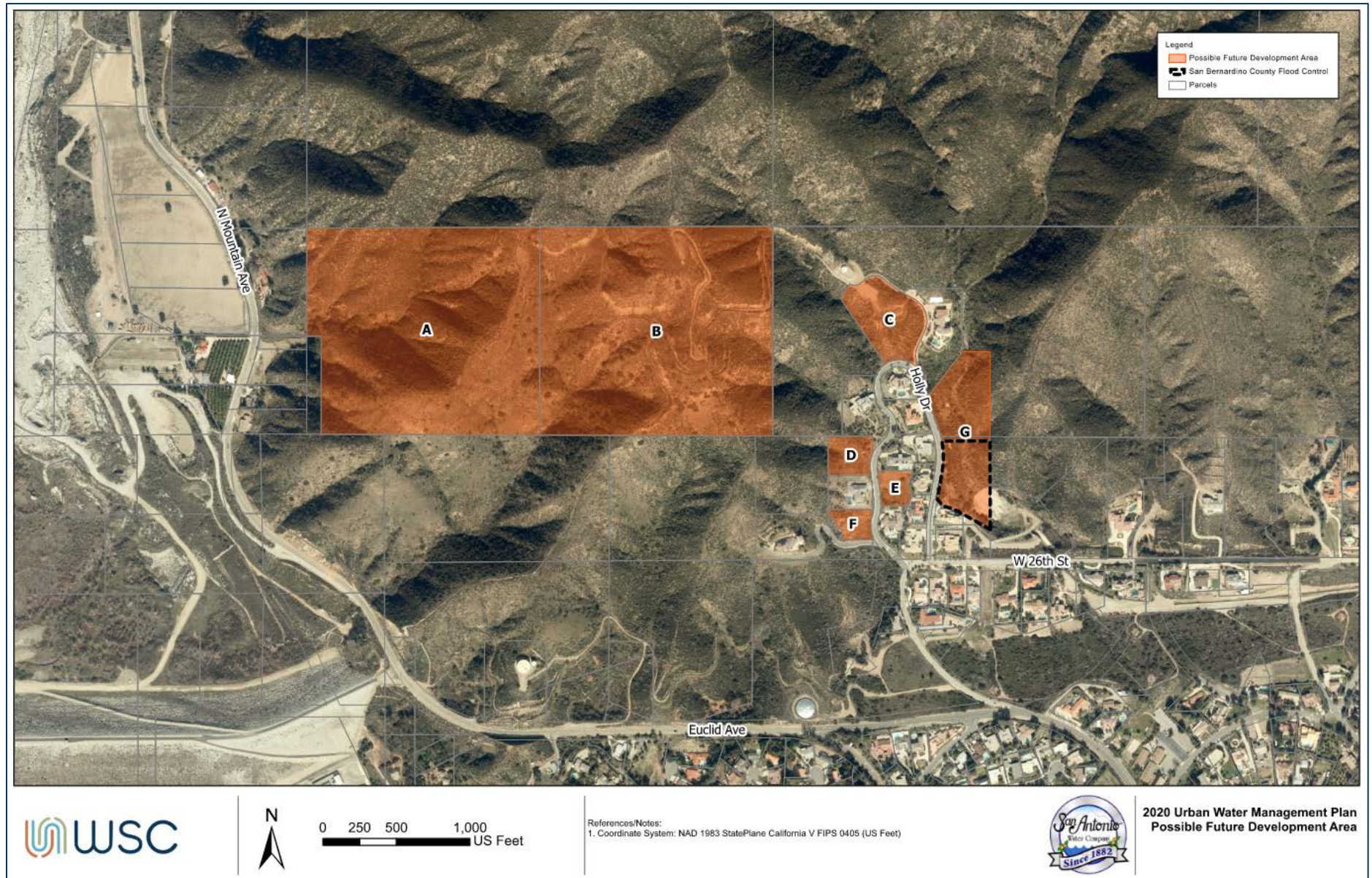


Figure 4-3. Areas Identified as Possible for Future Development

Table 4-2. Future Potable Demand from Future Development

AREA	ACRES	WATER DEMAND FACTOR (GPM/ACRE)	WATER DEMAND (GPM)	WATER DEMAND (AFY)
A ¹	33.8	1.036	17.53	10.9
B ¹	35.2	1.036	18.23	11.3
C	3.4	1.036	3.54	2.2
D	1.2	1.036	1.28	0.8
E	0.8	1.036	0.81	0.5
F	0.8	1.036	0.82	0.5
G ²	5.9	1.036	6.09	3.8
			ADDITIONAL FUTURE DEMAND, AFY	29.9

Notes:

¹If developed, parcel expected to be half developed. Half of total parcel acreage used to determine future demand.

²Half of area identified as future development is highly unlikely to be developed. Southern portion of Area G owned by San Bernardino County Flood Control. Dashed lines in Figure 4-3 delineate area owned by San Bernardino County Flood Control.

4.2.4 Characteristic Five-Year Water Use

As outlined in SAWCo's Bylaws, SAWCo provides water to its shareholders and expects its customers to maximize their shares. Therefore, SAWCo projects future water uses based on total shares and entitlement for each customer.

Table 4-3. DWR 4-2W Projected Demands for Water

USE TYPE	ADDITIONAL DESCRIPTION	PROJECTED WATER USE				
		2025	2030	2035	2040	2045
Single Family	SAWCo Domestic Customers	1,270	1,270	1,270	1,270	1,270
Sales/Transfers/Exchanges to Other Agencies	City of Upland	9,186	9,186	9,186	9,186	9,186
Sales/Transfers/Exchanges to Other Agencies	Monte Vista Water District	671	671	671	671	671
Sales/Transfers/Exchanges to Other Agencies	Cucamonga Valley Water District	8	8	8	8	8
Sales/Transfers/Exchanges to Other Agencies	City of Ontario	601	601	601	601	601
Industrial	Holiday Rock Company	269	269	269	269	269
Landscape	Red Hills Golf Course	444	444	444	444	444
Other	Red Hill HOA	20	20	20	20	20
Other	Minor Irrigators	102	102	102	102	102
Groundwater Recharge	Spreading Basins	2,000	2,000	2,000	2,000	2,000
-	TOTAL:	14,571	14,571	14,571	14,571	14,571

Table 4-4. DWR 4-3W Total Gross Water Use

	2020	2025	2030	2035	2040	2045
Potable and Raw Water From Table 4-1W and 4-2W	16,747	14,571	14,571	14,571	14,571	14,571
Recycled Water Demand* From Table 6-4W	-	-	-	-	-	-
Total Water Demand:	16,747	14,571	14,571	14,571	14,571	14,571

4.3 Climate Change Considerations

It is anticipated that SAWCo’s shareholders will continue to use water based on their share’s entitlement. Demands may decrease as the result of water supply shortage and drought messaging, as discussed in SAWCo’s Water Shortage Contingency Plan.

5 2020 URBAN WATER MANAGEMENT PLAN

Water Supply Characterization

This section describes the existing and projected supplies for SAWCo. SAWCo currently receives all its water supply from local sources including the San Antonio Creek, groundwater from the San Antonio Tunnel, and three groundwater basins: Chino Basin, Cucamonga Basin, and Six Basins.

Surface water from San Antonio Creek are pre-1914 water rights, and annual water availability is influenced by rainfall. The San Antonio Tunnel is a deep rock tunnel 100 feet below ground surface that collects naturally percolated groundwater. The three groundwater basins are each adjudicated, and SAWCo's water rights are defined by the various legal Judgements in place to protect and manage each basin. SAWCo also participates in groundwater recharge operations that enhance groundwater supply.

SAWCo provides water from the San Antonio Tunnel (Tunnel), the Chino Basin, and the Cucamonga Basin to its domestic customers. During times of large flows from the Tunnel, potable water overflows into the irrigation system through the Forebay Pump Station. This provides SAWCo with the opportunity to avoid large water losses within the domestic system and decrease groundwater extraction for the irrigation system.

IN THIS SECTION

- Purchased Water
- Groundwater
- Wastewater and Recycled Water
- Future Projects
- Summary of Existing and Planned Supplies
- Energy Intensity

5.1 Water Supply Analysis Overview

SAWCo currently relies on local supply sources to meet its shareholder needs. Supplies include local surface water from the San Antonio Creek and groundwater from several basins. SAWCo expects to continue using these local sources throughout the future.

Surface Water: SAWCo may obtain up to 13,864 AFY of surface water from the San Antonio Creek. However, the actual volume received depends on minimum stream flowrates and can vary significantly based on rainfall. Water from the San Antonio Creek is used to meet irrigation demands and also conveyed to the City of Upland’s water treatment plant for treatment and subsequent distribution by the City of Upland.

Tunnel Water: SAWCo may obtain all the volume of water in the San Antonio Tunnel (Tunnel). The Tunnel is supplied by naturally percolated groundwater, which can vary year to year based on rainfall and snowpack. SAWCo may also divert water from the San Antonio Creek spreading grounds north of the San Antonio Tunnel, where it is percolates into the tunnel and is conveyed to SAWCo’s Forebay Tank and can be used in either the domestic or irrigation system.

Groundwater: SAWCo has groundwater rights in the Chino, Cucamonga, and Six Basins, as summarized in Table 5-1 below.

Table 5-1. SAWCo's Groundwater Rights

GROUNDWATER BASIN	SAWCO RIGHTS, AFY	NOTES
Chino Basin	1,234	
Cucamonga Basin	4,500 – 8,500	SAWCo may obtain up to 6,500 AFY of groundwater from the Cucamonga Basin, provided 2,000 AF is spread each year. If SAWCo spreads less than 2,000 AFY, SAWCo may only extract 4,500 AFY. If SAWCo spreads an excess of 2,000 AFY, SAWCo may extract up to 95% of the total spreading surplus amount, but not more than 8,500 AFY.
Six Basins	932	

5.2 UWMP Water Supply Characterization

Details on SAWCo’s various supply sources are described in this section.

5.2.1 Purchased or Imported Water

SAWCo does not currently purchase or import water.

5.2.2 Groundwater

SAWCo obtains groundwater from the Chino, Cucamonga, and Six Basins groundwater basins. Groundwater extracted from the Chino Basin is used for potable demands only. Groundwater from the Cucamonga Basin and Six Basins is used within SAWCo’s irrigation system. Figure 5-1 shows the various groundwater basins SAWCo utilizes and their boundaries.

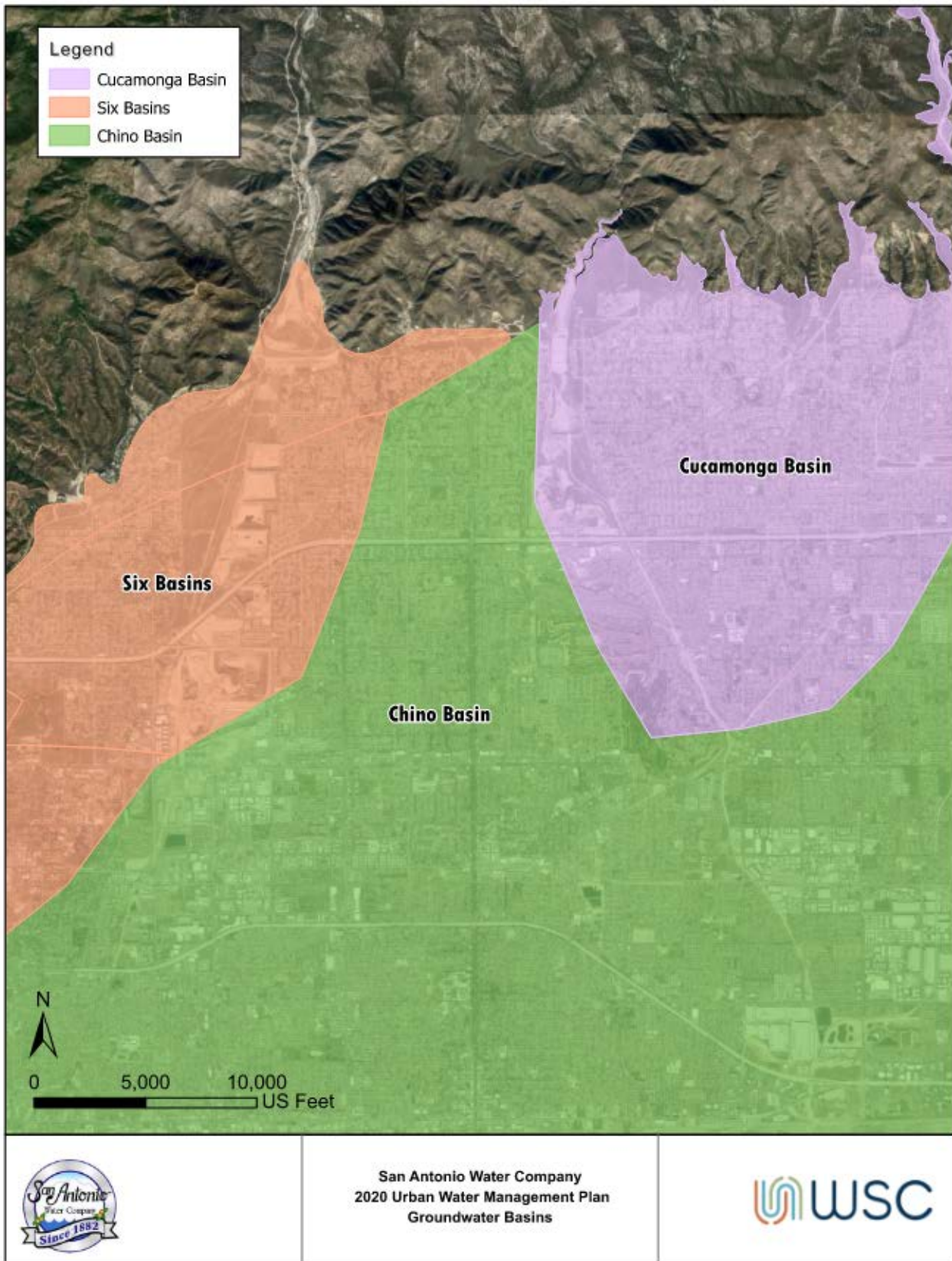


Figure 5-1. Groundwater Basins

5.2.2.1 Chino Basin

The Chino Basin is a subbasin to the Upper Santa Ana Valley Groundwater Basin and is designated by DWR as Basin 8-002.01. The Chino Basin underlies southeast Los Angeles County, northwest Riverside County, and southwest San Bernardino County. It is bound to the northwest by the San Jose fault, to the north by the Cucamonga fault and impermeable rocks that make up the San Gabriel Mountains. To the east, the Chino Basin is bounded by the Rialto-Colton fault, to the southeast by the Jurupa, Pedley, La Sierra Hills as well as the Santa Ana River. It is bounded to the southwest by the Chino and Puente Hills (California Department of Water Resources, 2016). The Chino Basin is considered a very-low-priority basin under the Sustainable Groundwater Management Act (SGMA).

The Chino Basin is governed by the Chino Basin Watermaster. The Chino Basin Watermaster serves to enforce the provisions of the 1978 Judgment in Chino Basin Municipal Water District vs. City of Chino et al (Judgment) and any other orders from the Court, as well as develops an Optimum Basin Management Program. Under the 1978 Judgment, the Chino Basin's safe yield was established as 140,000 AFY. The safe yield is defined in the Chino Basin Judgment as "the long-term average annual quantity of groundwater (excluding replenishment of stored water but including return flow to the Basin from use of replenishment or stored water) which can be produced from the Chino Basin under conditions of a particular year without causing an undesirable result" (Chino Basin Municipal Water District v. City of Chino, et al., 1978). The 1978 Chino Basin Judgment's allocation of the safe yield of the Chino Basin includes three separate Pools: The Overlying Agricultural Pool, Overlying Non-Agricultural Pool, and the Appropriative Pool. SAWCo is a member of the Appropriative Pool and has an appropriative right of 2.748 percent of the total appropriative rights in the Chino Basin. Under the 1978 Judgment, SAWCo was entitled to 1,506.888 AF. A copy of the 1978 Judgment is provided in Appendix D.

In 2020, the Safe Yield was recalculated to better manage the Basin and ensure sustainability. As established in the 2000 Optimum Basin Management Program (OBMP), the safe yield of the Chino Basin must be recalculated every 10 years, commencing in 2011. The Watermaster evaluated the safe yield recalculation using a groundwater flow model to redetermine the net recharge into the Chino Basin and identify any factors that could create undesirable results. The resulting Safe Yield was estimated at 135,000 AF (Chino Basin Watermaster, 2020). As a result, starting on June 30, 2020, SAWCo is entitled to 1,232.038 AF.

The Chino Basin Watermaster has also developed an updated 2020 OBMP that outlines how the Chino Basin should be managed over the next 20 years. The 2020 OBMP, provided as Appendix E, also includes the storage management plan that encompasses the recalculated safe yield.

The Chino Basin Watermaster also reallocates the unused portion of the Chino Basin safe yield from to the Overlying Agricultural Pool to the Appropriative Pool members as a supplement to the Appropriative Pool share of OSY rights in any year. These transfers are permanent if agricultural land has been converted to non-agricultural use, or temporary if agricultural pool extractions are less than their share of the safe yield. As agricultural production declines within the Chino Basin, the reallocation of water to the Appropriative Pool is expected to increase. Appropriators, like SAWCo, who are party to the Chino Basin Judgment are authorized to continue to produce groundwater while exceeding their water rights. Such extractions result in assessments by the Chino Basin Watermaster to pay for water to replenish the basin, through imported surface water recharge. Water to replenish the Chino Basin is purchased from Metropolitan Water District of Southern California (Metropolitan) by Chino Basin Watermaster in coordination with the Inland Empire Utilities Agency (IEUA) or from Appropriation Pool participants (Civiltex Engineering Inc. for San Antonio Water Company, June 2016).

5.2.2.2 Cucamonga Basin

The Cucamonga Basin is a subbasin to the Upper Santa Ana Valley Groundwater Basin and is designated by DWR as Basin 8-002.02. The Cucamonga Basin is bounded to the north by the San Gabriel Mountains and bounded by the Red Hill fault to the west, east and south (California Department of Water Resources, 2016). The Cucamonga Basin is considered a very-low-priority basin under the Sustainable Groundwater Management Act (SGMA).

In 1958, the Cucamonga Judgement was established and outlined water rights for individual groundwater producers, how much can be exported to non-overlying areas, and specific requirements for spreading (San Antonio Water Company vs Others, 1958). The Cucamonga Judgment stipulates production for all stakeholders of 22,721 AFY, with SAWCo's water production right of 6,500 AFY, provided SAWCo spreads 2,000 AFY of water from the San Antonio Canyon. If the annual spreading is less than 2,000 AFY, SAWCo's water rights may be reduced to a minimum amount of 4,500 AFY. However, if the spreading exceeds 2,000 AFY, SAWCo can credit 95% of the excess up to a maximum of 8,500 AFY production. From 2010-2019, SAWCo spread an average of 1,500 AFY; however, spreading between 2012 through 2018 were less than 2,000 AFY. As a result, SAWCo's 2020 production right from the Cucamonga Basin was limited to approximately 6,000 AF (4,500 AF plus the 10-year average spread). A copy of the Cucamonga Judgement is provided in Appendix F.

5.2.2.3 Six Basins

The Six Basins are a part of the Main San Gabriel Basin, designated by DWR as Basin 4-013 and as a very low priority basin. The Six Basins area consists of six interconnected groundwater basins: Canyon, Upper Claremont Heights, Lower Claremont Heights, Live Oak, Ganesha, and the Pomona Basins. The Six Basins area is bounded by the San Jose Hills to the south, the Chino Basin to the east, the San Gabriel Mountains to the north, and the Main San Gabriel Basin to the west.

The Six Basins are further broken down into the Four Basins and Two Basins. The Four Basins include the Canyon, Upper Claremont Heights, Lower Claremont Heights and Pomona Basins. The Two Basins refer to the Live Oak and Ganesha Basins. Water within the Two Basins is used solely by the City of La Verne (Jericho Systems, Inc. and Tom Dodson & Associates for Three Valley Municipal Water District, May 2021). SAWCo is entitled up to 7.166 percent of the OSY of the Four Basins. For 2020, SAWCo was entitled to 932.10 AFY with 2,643.30 AFY available from storage.

The Six Basins is managed by the Six Basins Watermaster. The Six Basins were adjudicated in 1998 through the stipulated judgement "Southern California Water Company vs. City of La Verne et al." known as the Six Basins Judgement, provided in Appendix G. The Six Basins Judgement specified a safe yield of 19,300 AFY and the Six Basins Watermaster establishes operating safe yields (OSY) annually. In additions, water users within the Six Basins may obtain "carryover rights" for unused production (Southern California Water Company vs. Others, 1998).

The Six Basins Watermaster is currently developing a Six Basins Strategic Plan (Strategic Plan). The Strategic Plan's Draft Program Environmental Impact Report (PEIR) is currently in a public review period. This Strategic Plan will become the conjunctive water management program utilized by the Six Basins Watermaster to implement water supply and conservation projects in coordination with others and to optimize conjunctive water management activities within the Six Basins (Jericho Systems, Inc. and Tom Dodson & Associates for Three Valley Municipal Water District, May 2021). Specifically, the Strategic Plan aims to:

- Enhance water supplies
- Enhance basin management
- Protect and enhance water quality
- Equitably finance the Strategic Plan implementation

5.2.2.4 Past Five Years

Groundwater extractions by basin over the past five years are provided in Table 5-2.

Table 5-2. DWR 6-1W Groundwater Volume Pumped

All or part of the groundwater described below is desalinated.

GROUNDWATER TYPE	LOCATION OR BASIN NAME	2016	2017	2018	2019	2020
Alluvial Basin	Chino Basin	897	393	487	477	738
Alluvial Basin	Cucamonga Basin	6,281	5,761	6,407	5,340	4,945
Alluvial Basin	Six Basins	757	884	969	1,180	1,252
-	TOTAL:	7,935	7,038	7,863	6,997	6,935

Table 5-3. DWR 6-1W Groundwater Volume Pumped: Potable

All or part of the groundwater described below is desalinated.

GROUNDWATER TYPE	LOCATION OR BASIN NAME	2016	2017	2018	2019	2020
Alluvial Basin	Chino Basin	897	393	487	477	738
Alluvial Basin	Cucamonga Basin	116	42	1	-	13
-	TOTAL:	1,013	435	488	477	751

Table 5-4. DWR 6-1W Groundwater Volume Pumped: Non-Potable

All or part of the groundwater described below is desalinated.

GROUNDWATER TYPE	LOCATION OR BASIN NAME	2016	2017	2018	2019	2020
Alluvial Basin	Cucamonga Basin	6,165	5,720	6,406	5,340	4,933
Alluvial Basin	Six Basins	757	884	969	1,180	1,252
-	TOTAL:	6,922	6,604	7,375	6,520	6,185

5.2.2.5 San Antonio Tunnel

SAWCo is entitled to all water supplied through the San Antonio Tunnel (Tunnel). The Tunnel is a deep rock tunnel located 100 feet below ground surface and is supported by redwood beams and solid rock. Groundwater naturally percolates into the Tunnel and can vary year to year based on rainfall and snowpack. SAWCo may also divert water from the San Antonio Creek spreading grounds north of the Tunnel, where it is percolates into the tunnel and used primarily as a potable supply. The Tunnel deliveries this supply at SAWCo’s Forebay station. In times of high Tunnel flows and low domestic demand, Tunnel water overflows into the irrigation system to avoid water losses. The average supply from the Tunnel since 1999 is 2,443 AFY and ranged from only 727 AF in 2015 to 3,682 AF in 1996.

5.2.3 Surface Water

SAWCo has rights for up to 13,864 AFY of surface water from the San Antonio Creek. However, the actual volume received depends on minimum stream flowrates and can vary significantly based on rainfall. SAWCo’s supply from the San Antonio Creek since 1999 ranged from a low of 1,181 AF in

2018 to a high of 9,072 AF in 2005. The average volume from San Antonio Creek during years with average rainfall years is 4,042 AFY.

5.2.4 Stormwater

SAWCo's water sources are limited to groundwater from the basins that underlie SAWCo's service area and local surface water runoff.

5.2.5 Wastewater and Recycled Water

SAWCo does not own or operate wastewater or recycled water facilities and therefore does not have any current nor planned recycled water use. SAWCo encourages the use of recycled water as a regional resource through its affiliation with the Inland Empire Utilities Agency (IEUA). In the event that a SAWCo customer were to acquire recycled water as a supply, the customer may choose to lease, sell, or inactivate their shares within SAWCo.

5.2.5.1 Wastewater Collection, Treatment, and Disposal

SAWCo's domestic customers utilize septic tanks to dispose of their wastewater.

5.2.6 Desalinated Water Opportunities

SAWCo does not currently nor plan to use desalinated water as a supply source.

5.2.7 Water Exchanges and Transfers

SAWCo maintains interconnections with the City of Upland. Two of these connections have been identified for emergency use. However, SAWCo has not provided or purchased any emergency sales through the emergency interconnections over the last five years. In addition, several water suppliers own shares in SAWCo; therefore, they are considered SAWCo customers or shareholders and are discussed in Chapter 4.

5.2.8 Future Water Projects

SAWCo is currently updating its Water Master Plan. As part of the Water Master Plan, future projects that may increase SAWCo's supply and reliability may be identified. The Water Master Plan is anticipated to be complete by the end of 2021.

SAWCo is currently constructing several projects to increase storage and capture all raw water released through the Frankish Tunnel. Both projects are anticipated to be complete in early 2021.

Table 5-5. DWR 6-7W Expected Future Water Supply Projects or Programs

The supplier will complete the table.

NAME OF FUTURE PROJECTS OR PROGRAMS	JOINT PROJECT WITH OTHER SUPPLIERS	AGENCY NAME	DESCRIPTION	PLANNED IMPLEMENTATION YEAR	PLANNED FOR USE IN YEAR TYPE	EXPECTED INCREASE IN WATER SUPPLY TO SUPPLIER, AF
Frankish Tunnel Outfall Improvements	No	N/A	Improve the Frankish Tunnel outfall to capture all water released through the Frankish Tunnel for storage into various groundwater basins for future use.	2021	All Year Types	
Holly Drive Reservoir Upgrades	No	N/A	Installation of two 100,000-gallon tanks for additional fire and operations water storage.	2022	All Year Types	0.55
Well 19	No	N/A	Construction of new well for domestic use.	2022-2023	All Year Types	2,400

5.2.9 Summary of Existing and Planned Sources of Water

SAWCo currently utilizes local surface water and groundwater sources to meet its customers' demands. SAWCo will continue to efficiently utilize existing sources to meet future needs. Future supply projections reflect 20-year average supply from the San Antonio Creek and San Antonio Tunnel, while groundwater sources reflect SAWCo's total water right by basin.

Table 5-6. DWR 6-8W Actual Water Supplies

WATER SUPPLY	ADDITIONAL DETAIL ON WATER SUPPLY	2020	
		ACTUAL VOLUME	WATER QUALITY
Groundwater (not desalinated)	Chino Basin	738	Drinking Water
Groundwater (not desalinated)	Cucamonga Basin	13	Drinking Water
Groundwater (not desalinated)	Cucamonga Basin	4,933	Other Non-Potable Water
Groundwater (not desalinated)	Six Basins	1,252	Other Non-Potable Water
Surface water (not desalinated)	San Antonio Creek	6,901	Other Non-Potable Water
Groundwater (not desalinated)	San Antonio Tunnel	1,833	Drinking Water
Groundwater (not desalinated)	San Antonio Tunnel	676	Other Non-Potable Water
-	TOTAL:	16,346	

Table 5-7. DWR 6-9W Projected Water Supplies

		2025	2030
WATER SUPPLY	ADDITIONAL DETAIL ON WATER SUPPLY	REASONABLY AVAILABLE VOLUME	REASONABLY AVAILABLE VOLUME
Surface water (not desalinated)	San Antonio Creek	4,416	4,416
Groundwater (not desalinated)	San Antonio Tunnel	2,178	2,178
Groundwater (not desalinated)	Chino Basin	1,234	1,234
Groundwater (not desalinated)	Cucamonga Basin	6,500	6,500
Groundwater (not desalinated)	Six Basins	932	932
-	TOTAL:	15,260	15,260

Supply from the San Antonio Creek and San Antonio Tunnel reflect 20-year average supply from 2000 through 2020. Supply from various groundwater basins reflect SAWCo's total water rights from each basin.

5.2.10 Special Conditions

As mentioned previously, SAWCo is currently developing a Water Master Plan. The master planning effort also includes a supply risk and resilience analysis that addresses both the domestic and irrigation systems. Existing supply sources were analyzed, the top risks to their supplies evaluated, and the impacts these risks would have on SAWCo’s ability to continue to provide a reliable and high-quality water to its shareholders quantified.

5.2.10.1 Climate Change Effects

Climate change is expected to result in more extreme droughts, shifting rainfall patterns, more intense rainfall and flooding, and higher variability from surface water supplies. Climate change is occurring and the best mitigation SAWCo can take is to plan and prepare for climate change related impacts. The Cal-Adapt Climate Projections for the Desert Region of San Bernardino County, of which SAWCo overlies, estimates a 2- to 4-inch decline in annual average rainfall by 2050 due to climate change. However, all models predict shifting rainfall patterns with wetter winters and drier summers (2021 California Energy Commission, 2021).

5.3 Energy Intensity

SAWCo monitors funds spent on energy at its facilities. In 2020, SAWCo spent approximately \$629,000 on energy. It was assumed that energy is billed at \$0.23 per kilo-Watt hour (kWh). Therefore, it was estimated that SAWCo consumed 2.7 million kWh to provide service to its customers, yielding an energy intensity of 167.3 kWh/AF.

Table 5-8. DWR O-1B Recommended Energy Reporting - Total Utility Approach

URBAN WATER SUPPLIER: San Antonio Water Company				
Water Delivery Product (If delivering more than one type of product use Table O-1C): Multiple Products (unable to use table O-1C)				
ENTER START DATE FOR REPORTING PERIOD	1/1/2020	URBAN WATER SUPPLIER OPERATIONAL CONTROL		
END DATE	12/30/2020			
		SUM OF ALL WATER MANAGEMENT PROCESSES	NON-CONSEQUENTIAL HYDROPOWER	
Water Volume Units Used: AF		TOTAL UTILITY	HYDROPOWER	NET UTILITY
	Volume of Water Entering Process (AF)	16,345	0	16,345
	Energy Consumed (kWh)	2,734,416	0	2,734,416
	ENERGY INTENSITY (KWH/AF)	167.3	0.0	167.3

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data): Estimate

Data Quality Narrative: Energy usage assumed based on a factor of \$0.23/kWh and applied to the total amount SAWCo paid in 2020.



Water Service Reliability and Drought Risk Assessment

This section considers SAWCo’s water supply reliability during normal, single dry, and multiple dry water years over the planning horizon. A Drought Risk Assessment of the next five years is also included.

The supply reliability assessment discusses factors (i.e. climatic, environmental, water quality, and legal) that could potentially limit the expected quantity of water available to SAWCo through 2045. Multiple drought scenarios are considered and the quantitative impacts of the aforementioned factors on water supply and demand are discussed, as well as possible methods for addressing these issues. The management tools that SAWCo has implemented to maximize current resources is also discussed.

IN THIS SECTION

- Water Service Reliability Assessment
- Drought Risk Assessment

6.1 Water Service Reliability Assessment

6.1.1 Constraints on Water Sources

As described in the previous section, SAWCo relies on surface water from the San Antonio Creek, naturally percolated water through the San Antonio Tunnel, and groundwater from several local basins.

Climatic Factors

Water available from the San Antonio Creek and Tunnel are highly susceptible to climate change and increased drought periods. The San Antonio Creek relies on rainfall and the snowpack in the local mountains. In periods of dry weather, the San Antonio Creek may cease to flow, resulting in decreased supply to SAWCo's irrigation system. The Tunnel also relies on naturally percolated groundwater from rainfall.

Groundwater within the Chino, Cucamonga, and Six Basins may be impacted by climate change. As other sources are negatively impacted, basin users may need to extract additional groundwater to meet their needs. Since the Chino, Cucamonga, and Six Basins are adjudicated, SAWCo obtains water rights within these basins. Should severe conditions occur, SAWCo's allocation may be reduced to avoid over-extraction and harm to the basins. In the event that SAWCo's water allocations are reduced, SAWCo's shareholders may also receive a reduction in allocation.

Environmental Factors

Local groundwater basins may be impacted by water quality. Groundwater management agencies, like the Chino Basin Watermaster, has and continues to focus on sustainable basin management to ensure local sources remain and that stakeholders can fully utilize their water rights. The Chino Basin Watermaster continues to monitor contaminants that may impact supply and publishes water quality data in the State of the Basin report every two years.

Similarly, the Six Basins Watermaster publishes an annual report that addresses the status of the Six Basins, including details on groundwater levels and the operating safe yield determination.

Other Factors

In times of severe drought, total entitlement to SAWCo and its shareholders has been adjusted to mitigate supply shortages. Entitlement has been reduced equally among all shareholders, based on a percentage. Should future severe dry periods occur, it is possible that entitlement may need to be reduced to align with supply available and in coordination with other supply management agencies and users, like Watermasters and other groundwater basin users.

6.1.1 Year Type Characterization

As required, the water service reliability assessment and Drought Risk Assessment (DRA) analyze supply over several water years: normal, single dry, and multiple dry years.

DWR defines these years as:

- **Normal Year:** this condition represents the water supplies a supplier considers available during normal conditions. This could be a single year or averaged range of years that most closely represents the average water supply available.
- **Single Dry Year:** the single dry year is recommended to be the year that represents the lowest water supply available.

- **Five-Consecutive Year Drought:** the driest five-year historical sequence for the supplier, which may be the lowest average water supply available for five years in a row.

6.1.1.1 Sources for Water Data

SAWCo provides water service based on the number of shares a customer holds. To determine the amount of supply available, the 20-year average volume was determined, as shown in Figure 6-1. SAWCo will only produce what is required to meet shareholder’s demands; therefore, it assumed that the total supply available will equal the Company-wide shareholder entitlement of 14,571 AFY.

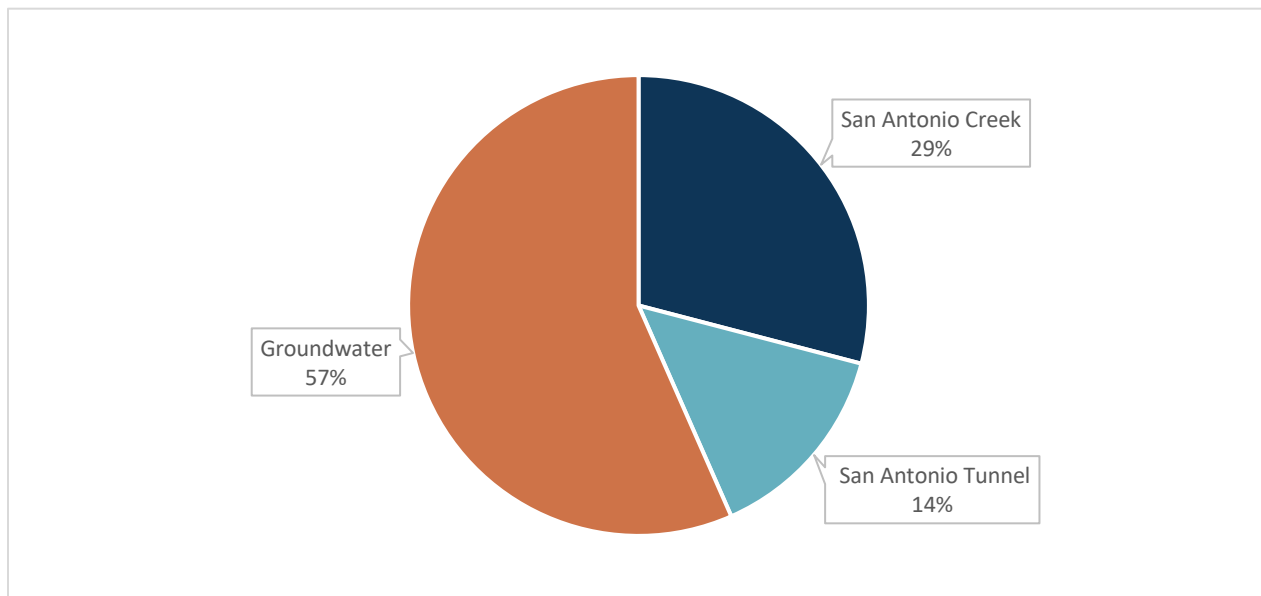


Figure 6-1. Average Supply

Table 6-1. DWR 7-1W Basis for Water Year Data

Quantification of available supplies is provided in this table as either volume only, percent only, or both.

YEAR TYPE	BASE YEAR	AVAILABLE SUPPLY IF YEAR TYPE REPEATS	
		VOLUME AVAILABLE	PERCENT OF AVERAGE SUPPLY
Average Year		14,571	100%
Single-Dry Year		14,571	100%
Consecutive Dry Years 1st Year		14,571	100%
Consecutive Dry Years 2nd Year		14,571	100%
Consecutive Dry Years 3rd Year		14,571	100%
Consecutive Dry Years 4th Year		14,571	100%
Consecutive Dry Years 5th Year		14,571	100%

6.1.2 Water Service Reliability

Results of the water supply and demand analysis for normal, single dry, and five-year consecutive dry droughts are shown in the following tables. SAWCo expects to meet demands under all water year scenarios with existing supply sources.

Depending on rainfall and other local factors, the amount of water available from the San Antonio Creek and Tunnel may be reduced. The variability of water utilized from each source is illustrated in Figure 6-2. SAWCo plans to mitigate reductions from San Antonio Creek by increased groundwater pumping in drier years.

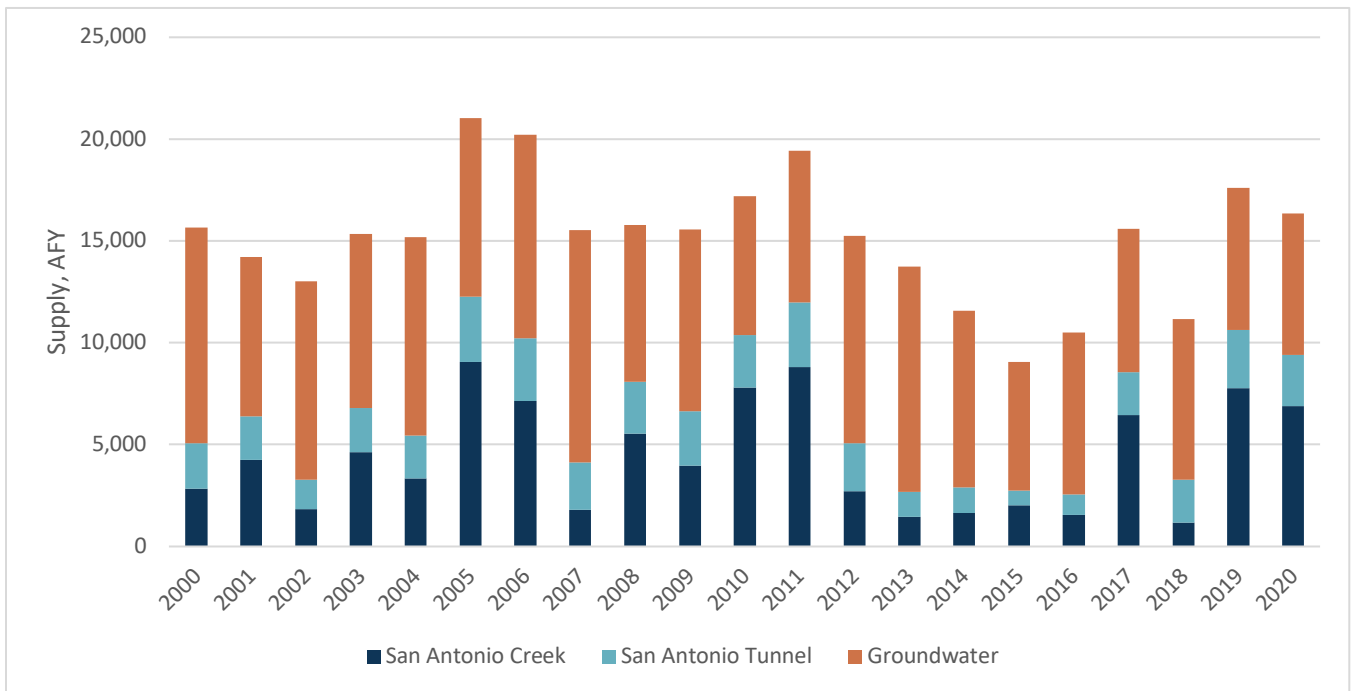


Figure 6-2. Historical Supply Variability

Table 6-2. DWR 7-2W Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals From Table 6-9W	15,260	15,260	15,260	15,260	15,260
Demand Totals From Table 4-3W	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:	689	689	689	689	689

Supply totals reflect 20-year average supply from the San Antonio Creek and Tunnel, and total SAWCo allocation rights for groundwater.

Table 6-3. DWR 7-3W Single Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals	14,571	14,571	14,571	14,571	14,571
Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:	0	0	0	0	0

Table 6-4. DWR 7-4W Multiple Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	Supply Totals	14,571	14,571	14,571	14,571	14,571
	Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:		0	0	0	0	0
Second Year	Supply Totals	14,571	14,571	14,571	14,571	14,571
	Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:		0	0	0	0	0
Third Year	Supply Totals	14,571	14,571	14,571	14,571	14,571
	Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:		0	0	0	0	0
Fourth Year	Supply Totals	14,571	14,571	14,571	14,571	14,571
	Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:		0	0	0	0	0
Fifth Year	Supply Totals	14,571	14,571	14,571	14,571	14,571
	Demand Totals	14,571	14,571	14,571	14,571	14,571
DIFFERENCE:		0	0	0	0	0

6.1.3 Descriptions of Management Tools and Options

SAWCo relies on local sources to meet demands and intends to continue to utilize existing sources well into the future. SAWCo is proactive in ensuring these resources, such as the San Antonio Tunnel, is cared for and continues to evaluate its condition to ensure long-term reliability.

6.2 Drought Risk Assessment

The Drought Risk Assessment (DRA) is based on an analysis of historical drought data forecasted into the future under various drought conditions, with a focus on the five-year consecutive drought scenario. The DRA analyzes historical data to assess patterns and more reliably determine if there could be any water shortages in the next five years. If demands cannot be met by the expected supply available, shortage response actions from SAWCo's WSCP may be implemented. Details on SAWCo's WSCP are provided in Appendix H.

6.2.1 Data, Methods, and Basis for Water Shortage Condition

The data, methods, and basis for a water shortage condition were identified using typical normal year supply and total possible system demand (total entitlement based on all SAWCo shares). Since the total number of shares within SAWCo is fixed, the total demand is also fixed, and therefore constant over the next five years.

6.2.2 DRA Water Source Reliability

The DRA provides a snapshot of the anticipated surplus or deficit if a drought were to occur in the next five years. As described previously, SAWCo provides water based on total number of shares a stakeholder possesses. SAWCo will provide the water entitled to its shareholder, or only what is needed, to meet shareholder demands. SAWCo anticipates meeting all demands over the next five years.

Table 6-5. DWR 7-5 Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)

2021	Gross Water Use	14,571
	Total Supplies	14,571
	Surplus/Shortfall without WSCP Action	0
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	0
	Resulting Percent Use Reduction from WSCP Action	0%
	2022	Gross Water Use
Total Supplies		14,571
Surplus/Shortfall without WSCP Action		0
Planned WSCP Actions (Use Reduction and Supply Augmentation)		
WSCP (Supply Augmentation Benefit)		
WSCP (Use Reduction Savings Benefit)		
Revised Surplus/Shortfall		0
Resulting Percent Use Reduction from WSCP Action		0%
2023		Gross Water Use
	Total Supplies	14,571
	Surplus/Shortfall without WSCP Action	0
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	0
	Resulting Percent Use Reduction from WSCP Action	0%
	2024	Gross Water Use
Total Supplies		14,571
Surplus/Shortfall without WSCP Action		0
Planned WSCP Actions (Use Reduction and Supply Augmentation)		
WSCP (Supply Augmentation Benefit)		
WSCP (Use Reduction Savings Benefit)		
Revised Surplus/Shortfall		0
Resulting Percent Use Reduction from WSCP Action		0%
2025		Gross Water Use
	Total Supplies	14,571
	Surplus/Shortfall without WSCP Action	0
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	0
	Resulting Percent Use Reduction from WSCP Action	0%



2020 URBAN WATER MANAGEMENT PLAN

Water Shortage Contingency Plan Summary

The Water Shortage Contingency Plan (WSCP) is a strategic plan that SAWCo uses to prepare for and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the water supply available is not sufficient to meet the normally expected customer water use at a given time. A shortage may occur for many reasons, such as an extended drought, water pollution, power outage, or a catastrophic event.

The WSCP provides guidance to SAWCo’s Board of Directors, staff, and the public by identifying anticipated water shortages and response actions to manage any water shortage with predictability and accountability in an efficient manner. This WSCP is intended to provide a working framework and options to guide SAWCo’s response to water shortages.

IN THIS SECTION

- WSCP Overview

7.1 WSCP Overview

The WSCP is composed of the following elements:

Water Supply Reliability Analysis

Summarizes SAWCo's water supply analysis and reliability and identifies any key issues that may trigger a shortage condition. Details on the water supply reliability analysis are provided in Chapter 7.

Annual Water Supply and Demand Assessment

Describes the key data inputs, evaluation criteria, and methodology for assessing the system's reliability for the coming year and the steps to formally declare a water shortage.

Shortage Stages

Establishes water shortage levels to clearly identify and respond to a water shortage emergency.

Shortage Response Actions

Describes the response actions that may be implemented or considered for each shortage stage to reduce gaps between available supply and demand.

Communication Protocols

Describes communication protocols SAWCo follows to ensure that its stakeholders are well-informed of shortage conditions and requirements.

Compliance and Enforcement

Defines compliance and enforcement actions available to implement the WSCP.

Legal Authority

Summarizes the legal documents that provide SAWCo with the authority to declare a water shortage emergency and implement and enforce response actions.

Financial Consequences of WSCP Implementation

Describes the anticipated financial impact of a water shortage and identifies mitigation strategies to offset financial burdens.

Monitoring and Reporting

Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP implementation. Results will be used to determine whether additional shortage response actions should be implemented and if current actions are successful.

WSCP Refinement Procedures

Describes the factors that may trigger updates to the WSCP and outlines how to complete an update.

Special Water Features Distinctions

Defines considerations and definitions for water use for decorative features versus pools and spas. Decorative features include ornamental fountains, ponds, and other aesthetic features.

Plan Adoption, Submittal, and Availability

Describes the WSCP adoption process, submittal, and availability after revision.

The WSCP is a stand-alone document that can be modified as needed, and included as Appendix H.



Demand Management Measures

This section provides a comprehensive description of the water conservation programs that SAWCo has implemented for the past five years, is currently implementing, and plans to implement in the future.

8.1 Demand Management Measures for Wholesale Suppliers

8.1.1 Metering

In September 2020, SAWCo’s Board approved a \$740,000 project to replace all meters with new automated meters. The new meters will be Automated Meter Reading (AMR) cellular meters and will record water use daily. In addition, SAWCo is developing an online portal so that all shareholders can access their water consumption and receive alerts directly. All meters were replaced in early 2021. Previously, SAWCo staff visited meters once a month and manually read and logged meters.

IN THIS SECTION

- Demand Management Measures for Wholesalers
- Other Demand Management Measures
- Reporting Implementation

8.1.2 Public Education and Outreach

SAWCo provides updated information on its website, Facebook account, through quarterly newsletters, bill inserts, and other outreach materials. SAWCo also participates in local events such as The Water Fair and Pancake Breakfast.

8.1.3 Water Conservation Program Coordination and Staffing

SAWCo does not have a dedicated water conservation coordinator, but employs administrative staff devoted to commit part time as SAWCo's water conservation representative.

8.1.4 Asset Management

SAWCo uses an "Asset Depreciation Schedule" that provides equipment service life for different types of water distributions facilities. A straight-line depreciation method is used to determine remaining service life estimates of existing equipment for the purposes of making replacement recommendations. SAWCo is currently developing an updated Water Master Plan that will identify replacement projects. SAWCo also maintains an annual maintenance budget to respond to needed repairs and perform routine preventive maintenance.

8.1.5 Wholesale Supplier Assistance Programs

SAWCo's wholesale agencies are provided toilets with installation for their customers. Agencies will provide name and contact information and contractor Bottomline Solutions will contact to set up appointment to remove old toilet and install new UHET toilets. Old toilets are also hauled away and disposed of.

8.2 Other Demand Management Measures - Rebates

SAWCo currently administers the following rebate programs. More information on each of these rebates can be found on their website: <https://www.sawaterco.com/rebates>.

High-Efficiency Clothes Washers

Using high-efficiency washers can reduce water and energy usage in the home. The high-efficiency washers only use about 20-60% of water compared to traditional washers, which translate to energy savings as it uses as little as 20-50% of energy because there is less water to heat. SAWCo offers rebate starting at \$85 for purchase of a high-efficiency washers. A listing of high-efficiency washers can be found at SoCal WaterSmart web site.

Weather-Based Irrigation Controllers

The Weather-Based Irrigation Controllers (WBICs) help reduce overwatering by applying water only when plants need it. It provides the appropriate watering schedule, adjusts for weather changes and irrigates based on the needs of the landscape and soil conditions. SAWCo offers rebates starting at \$80 per controller for less than one acre of landscape and \$35 per station for more than one acre of landscape.

Rotating Sprinkler Nozzles

Rotating sprinkler nozzles use less water than traditional sprinklers because it operates with lower precipitation rates, have greater uniform distribution and coverage. Rotating nozzles are a great water conservation tool as it applies water more slowly and uniformly than conventional sprays, especially when adjusted for specific site conditions. To help with wasteful water runoff, check out SoCal WaterSmart for recommended rotating nozzles. SAWCo offers \$2 per nozzle rebates with a minimum quantity of 30 nozzles.

Turf Removal

SAWCo offers a turf removal rebate. Interested stakeholders can apply through SoCal WaterSmart at <https://socalwatersmart.com>.

Rain Barrels and Cisterns

Rain barrels and cisterns can be installed to capture stormwater and runoff from rooftops and stored for later use. SAWCo offers a \$35 rebate for the purchase of a rain barrel and rebates for cisterns start at \$250.

Single Family/Multi Family High Efficiency Toilet

SAWCo offers single family or multifamily premium high efficiency toilet rebates, starting at \$40 for a 1.08 gallons per flush (GPF) toilet.

Soil Moisture Sensor Systems

Soil moisture sensor systems helps to save water by sensing the moisture in the soil and regulate the irrigation system for watering in response to changes of the weather for large residential sites.

8.3 Reporting Implementation

SAWCo provided an update to its Board on April 20, 2021 summarizing the various conservation efforts implemented during 2020 and summarized below.

8.3.1 Local Assistance in meeting Best Management Practices

Table 8-1. Conservation Rebates

RESIDENTIAL REBATE PROGRAMS (FISCAL YEAR) THRU METROPOLITAN WATER DISTRICT	DEVICES/REBATES	EST. GALLONS SAVED/ DEVICE/YEAR	TOTAL EST. GALLONS SAVED PER YEAR
High Efficiency Clothes Washers	2	11,243	22,486
Rotating Nozzles	0		
Weather Based Irrigation Controllers	1	105,917	105,917
High Efficiency Toilets (premium)	1	13,851	13,851

Rain Barrels	0	619	
Turf Removal	0		
Landscape Audit	1	3,485	3,485
Total Savings for calendar year – thru 12/31/2020	5		145,739

8.3.2 SAWCo's efforts in meeting Best Management Practices as of 3/31/2021

Table 8-2. DMM Efforts

SAWCO PROGRAMS	TOTAL BUDGET	DEVICES/REBATES	ESTIMATED GALLONS SAVED PER DEVICE PER YEAR	TOTAL ESTIMATED GALLONS SAVED PER YEAR
Toilet Direct Installation for SAWCo Customers	\$5,000 Cost to date: \$1,035 4 toilets	4	15,600	62,400
SAWCo Wholesale Agencies Assistance-Toilet Direct Installation	\$15,000 Cost to date: \$3,860 14 toilets	14	15,600	218,400
TOTAL	\$20,000	18		280,800

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2020 URBAN WATER MANAGEMENT PLAN

Plan Adoption, Submittal, and Implementation

This section describes steps taken to adopt and submit the and to make it publicly available.

9.1 Notice of Public Hearing

Before the public hearing, SAWCo made a draft WSCP and draft UWMP available for public inspection at SAWCo's office and website. Pursuant to CWC Section 10642, general notice of the public hearing was provided through publication of the hearing date and time and posting of the hearing at SAWCo's office.

IN THIS SECTION

- Public Hearing and Notices
- Public Hearing and Adoption
- Plan Submittal
- Public Availability

Table 9-1 provides a summary of the notifications that were issued as a part of SAWCo's development of the UWMP. SAWCo notified the public within its service area of the opportunity to provide input regarding the UWMP. A copy of the public outreach materials, including newspaper notices and invitation letters, are included in Appendix B.

Table 9-1. DWR 10-1W Notification to Cities and Counties

Supplier has not notified more than 10 cities or counties in accordance with Water Code Sections 10621 (b) and 10642. Completion of the table is required.

CITY	60 DAY NOTICE	NOTICE OF PUBLIC HEARING	OTHER
City of Upland	Yes	Yes	
City of Ontario	Yes	Yes	
City of Pomona	Yes	Yes	
COUNTY	60 DAY NOTICE	NOTICE OF PUBLIC HEARING	OTHER
County of San Bernardino	Yes	Yes	
OTHER	60 DAY NOTICE	NOTICE OF PUBLIC HEARING	OTHER
Cucamonga Valley Water District	Yes	Yes	
Monte Vista Water District	Yes	Yes	
Chino Basin Watermaster	Yes	Yes	

9.2 Public Hearing and Adoption

Prior to adoption of the WSCP and 2020 UWMP, SAWCo held a public hearing regarding its WSCP and UWMP on September 21, 2021.

The WSCP and UWMP were publicly reviewed during the September 21, 2021 public hearing. This hearing provided the cities and counties and other members of the public a chance to review the staff report and attend the hearing to provide comment. The public hearing took place before the adoption allowing opportunity for the report to be modified in response to public input. Following the public hearing, the WSCP and UWMP were adopted by SAWCo on September 21, 2021.

A copy of the Resolution of Plan Adoption signed by the SAWCo Board is included as Appendix C of the UWMP. The UWMP includes all applicable information necessary to meet the requirements of CWC. The 2020 UWMP and WSCP were submitted to the DWR within 30 days of adoption.

9.3 Plan Submittal

A hard copy of the Final 2020 UWMP and WSCP were sent to the California State Library and electronic copies to DWR (electronically using the WUEdata reporting tool), and electronic copies to all cities and counties within SAWCo's service area within 30 days of adoption.

9.4 Public Availability

To fulfill the requirements of CWC Section 10642 of the UWMP Act, SAWCo made the 2020 UWMP and WSCP available online and at the main SAWCo office located at 139 N. Euclid Avenue, Upland, CA 91786-6036 between the hours of 8:00 am and 4:00 pm, Monday – Thursday, and on alternating Fridays between 8:00 am and 3 pm, for public review within 30 days of adoption.

9.5 Amending an Adopted UWMP or WSCP

Amendments to the SAWCo's 2020 UWMP and WSCP will be made on an as needed basis. Should SAWCo need to amend the adopted 2020 UWMP or WSCP in the future, SAWCo will hold a public hearing for review of the proposed amendments to the document and send a 60-day notification letter to all cities and counties within their service area and notify the public in same manner as set forth in this UWMP. Once the amended document is adopted, a copy of the finalized version will be distributed to the California State Library, DWR (electronically using the WUEdata reporting tool), and all cities and counties within SAWCo's service area within 30 days of adoption. The finalized version will also be made available to the public both online on SAWCo's website and in person at SAWCo's office during normal business hours.

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2020 URBAN WATER MANAGEMENT PLAN

References

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Appendix A. DWR Review Checklist

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Appendix B. Letters of Notification and Public Hearing Notices

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Appendix C. Adoption Resolutions

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Appendix D. 1978 Chino Basin Judgment

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Appendix E. Chino Basin 2020 Optimum Basin Management Program

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Appendix F. Cucamonga Judgment



Appendix G. Six Basins Judgment

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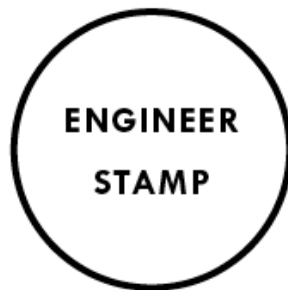
Appendix H. Water Shortage Contingency Plan



SAN ANTONIO WATER COMPANY

Public Review Draft Water Shortage Contingency Plan

SEPTEMBER 2021



Prepared by Water Systems Consulting, Inc.



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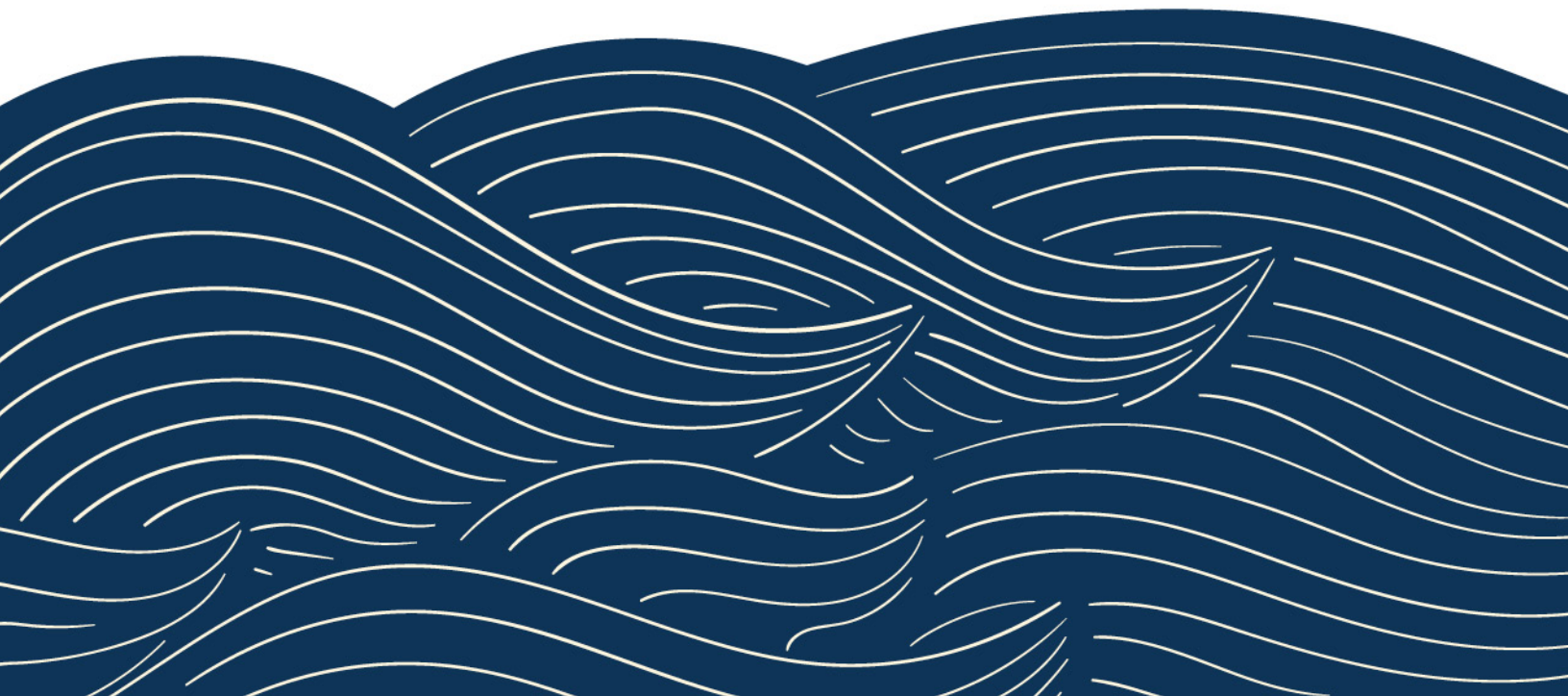
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Draft Water Shortage Contingency Plan



1.1 Water Supply Reliability Analysis

The San Antonio Water Company (SAWCo) analyzed future demand and supply in its 2020 Urban Water Management Plan (UWMP). The UWMP analyzed conditions for normal, or average, single-dry, and five-year consecutive dry periods. SAWCo aims to provide shareholders full entitlement, but in periods of drought, allocations per share may be reduced, depending on supply availability. In all scenarios, SAWCo expects to meet customer demands based on shareholders full entitlement. In addition, a Drought Risk Assessment was performed to analyze anticipated supply and demand for the next five years (2021-2025). The Drought Risk Assessment analysis determines that SAWCo's supplies are able to reliably meet customer demands. Details on this analysis as well as supply and demand estimates are discussed in the UWMP.

1.2 Annual Water Supply and Demand Assessment

As an urban water supplier, SAWCo must prepare and submit an Annual Water Supply and Demand Assessment (Annual Assessment). The Annual Assessment is a near-term outlook for supplies and demands. It is used to determine whether the potential for a supply shortage exists and whether there is a need to trigger a WSCP shortage level and response actions to maintain supply reliability. Starting in 2022, the Annual Assessment will be due by July 1st of every year, as indicated by CWC Section 10632.1. SAWCo's Annual Assessment procedure, including key data inputs, evaluation criteria and responsible staff is summarized in Table 1. Nearly all of SAWCo's staff will be involved in the Annual Assessment and implementation of this WSCP.

Table 1. Annual Assessment Procedure

TIMING	ASSESSMENT ACTIVITIES	PROCEDURE, KEY DATA INPUTS, EVALUATION CRITERIA AND OTHER CONSIDERATIONS	SAWCO STAFF RESPONSIBLE
November–December	Estimate unconstrained demands for the coming year	SAWCo anticipates annual demands equal to that of the total active shares, based on yearly entitlement.	SAWCo Staff
November–December	Estimate available supplies for the coming year, considering the following year will be dry	SAWCo will analyze historical rainfall and other local groundwater conditions that may impact supply availability and warrant a reduction to shareholder’s entitlement. SAWCo will also work with various groundwater management agencies, like the Chino Basin Watermaster, etc., to monitor groundwater conditions and stay informed of any impacts to SAWCo’s ability to extract and provide local groundwater. SAWCo will monitor groundwater levels provided through the Tunnel. The Tunnel serves as an indicator for conditions within the local mountains and available water for the San Antonio Creek/percolated surface water.	SAWCo Staff
December–January	Consider potential infrastructure constraints that may impact supply delivery	Identify any known infrastructure issues that may pertain to near-term water supply reliability, including repairs, construction, and environmental mitigation measures that may temporarily constrain capabilities, as well as any new projects that may add to system capacity. Identify any facilities out of service due to water quality problems, equipment failure, etc. that may impact normal water deliveries.	Operations Staff
February	Inform the Board of Annual Assessment findings	The General Manager shall inform the Board of the Annual Assessment and results and make a recommendation of which shortage stage to enter, if applicable, if the Board is in session. If the Board is not in session, the General Manager shall immediately request a special meeting of the Board.	SAWCo Board or General Manager
March	Notify the Public	The Board/SAWCo will make a public announcement published in the Inland Valley Daily Bulletin and become effective immediately upon publication. SAWCo will coordinate with other agencies that it provides water to, in addition to other local agencies.	General Manager
Ongoing	Implement WSCP actions, if needed	Relevant members of SAWCo’s staff will implement shortage response actions associated with the declared water shortage level.	SAWCo Staff
Prior to July 1 st	Submit Annual Assessment	Send final Annual Assessment to DWR.	General Manager

1.3 Water Shortage Levels

SAWCo uses four (4) water shortage stages to identify and response to water shortage emergencies. Stage 1 is implemented year-round to encourage water conservation and responsible water management, regardless of a shortage emergency.

The Water Code outlines six standard water shortage levels that correspond to a gap in supply compared to normal year availability. The six standard water shortage levels correspond to progressively increasing estimated shortage conditions (up to 10-, 20-, 30-, 40-, 50-percent and greater than 50-percent shortage compared to the normal reliability condition) and align with the response actions that a water supplier would implement to meet the severity of the impending shortages.

The Water Code allows suppliers with an existing WSCP that uses different water shortage levels to comply with the six standard levels by developing and including a cross-reference relating to its existing shortage categories to the six standard water shortage levels. SAWCo is maintaining its current four shortage stages for this WSCP, as shown in Table 2. A cross reference to the six standard stages is shown in Figure 1. SAWCo's existing stages and their relationship to the six standard stages.

Table 2. DWR 8-1 Water Shortage Contingency Plan Levels

SHORTAGE LEVEL	PERCENT SHORTAGE RANGE	SHORTAGE RESPONSE ACTIONS
1	Up to 10%	Required savings may be met through a combination of quantifiable and unquantifiable actions. SAWCo will only implement measures to the extent necessary to mitigate a water shortage, although estimates may indicate a greater savings is obtainable. It is anticipated that some of the required savings will be met through quantifiable shortage response actions and the remaining amount savings will be met through other actions, including communication and outreach efforts. For a list of all SAWCo specific shortage response actions and their potential savings, please refer to DWR Table 8-2.
2	Up to 30%	Required savings may be met through a combination of quantifiable and unquantifiable actions. SAWCo will only implement measures to the extent necessary to mitigate a water shortage, although estimates may indicate a greater savings is obtainable. It is anticipated that some of the required savings will be met through quantifiable shortage response actions and the remaining amount savings will be met through other actions, including communication and outreach efforts. For a list of all SAWCo specific shortage response actions and their potential savings, please refer to DWR Table 8-2.
3	Up to 50%	Required savings may be met through a combination of quantifiable and unquantifiable actions. SAWCo will only implement measures to the extent necessary to mitigate a water shortage, although estimates may indicate a greater savings is obtainable. It is anticipated that some of the required savings will be met through quantifiable shortage response actions and the remaining amount savings will be met through other actions, including communication and outreach efforts. For a list of all SAWCo specific shortage response actions and their potential savings, please refer to DWR Table 8-2.
4	Greater than 50%	Required savings may be met through a combination of quantifiable and unquantifiable actions. SAWCo will only implement measures to the extent necessary to mitigate a water shortage, although estimates may indicate a greater savings is obtainable. It is anticipated that some of the required savings will be met through quantifiable shortage response actions and the remaining amount savings will be met through other actions, including communication and outreach efforts. For a list of all SAWCo specific shortage response actions and their potential savings, please refer to DWR Table 8-2.

SAWCo Shortage Stage	Supply Reduction (%)		Standard Shortage Stage	Standard Supply Shortage Level
1	10%		1	Up to 10%
2	30%		2	Up to 20%
3	50%		3	Up to 30%
4	Greater than 50%		4	Up to 40%
			5	Up to 50%
			6	Greater than 50%

Figure 1. SAWCo's existing stages and their relationship to the six standard stages

1.4 Shortage Response Actions

SAWCo expects to mitigate supply shortages through a variety of response actions, including various supply sources, demand reduction actions, conservation, outreach, and if necessary, mandatory prohibitions.

1.4.1 Demand Reduction

SAWCo has identified a variety of demand reduction actions to offset supply shortages. These actions include, but are not limited to, conservation and rebate programs, leak detection and repair, limitations on irrigation and other voluntary actions to reduce customer demand. Demand reduction actions are summarized in Table 3.

Table 3. DWR 8-2 Demand Reduction Actions

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
Stage 1	Landscape - Limit landscape irrigation to specific times	0-5%	Watering restricted to between the hours of 10:00 am and 6:00 pm	Yes
Stage 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-5%	Leaks and misadjusted water fixtures shall be corrected within 72 hours of discovery or notification by SAWCo.	Yes
Stage 1	Other	0-5%	Runoff from irrigation or leaks prohibited.	Yes
Stage 1	Other	0-5%	Washing of automobiles, trucks, trailers, boats, airplanes, and other types of equipment (mobile or otherwise) unless done with a hand-held bucket or hand-held hose equipped with a positive shutoff nozzle for quick rinses. The nozzle shall be removed when the hose is not in use to ensure the water supply is shut off.	Yes
Stage 1	CII - Restaurants may only serve water upon request	0-5%	With respect to eating and drinking establishments of any kind, including but not limited to, any restaurant, hotel, café, cafeteria, bar or club, whether public or private, that benefits from the supply of water by SAWCo shall not provide drinking water to any person unless expressly requested.	Yes
Stage 2	Other	5-10%	The washing of sidewalks, walkways, driveways, public and private parking areas and all other impervious hard surfaced areas by direct hosing when runoff water directly flows to a gutter or storm drain, except as may be necessary to properly dispose of flammable or other dangerous liquids or substances, wash away spills that present a trip and fall hazard, or to prevent or eliminate materials dangerous to the public health and safety.	Yes
Stage 2	Landscape - Limit landscape irrigation to specific days	5-10%	Outdoor irrigation of landscape by sprinklers is permitted only on even days of the month for those locations having a street address with an even last digit. Outdoor irrigation by sprinklers is permitted only on odd days of the month for those locations having a street address with an odd last digit. No outdoor irrigation shall take place between the hours of 10:00 a.m. and 6:00 p.m.	Yes

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
Stage 2	Other	5-10%	The washing of automobiles, trucks, trailers, boats, and other types of equipment (mobile or otherwise) is prohibited except on the designated outdoor water use days between the hours of 12:00 midnight to 12:00 noon and sundown to 12:00 midnight. Such washing, when allowed, shall be done with a hand held bucket or hand held hose equipped with a positive shutoff nozzle for quick rinses. The nozzle shall be removed when the hose is not in use to ensure the water supply is shutoff.	Yes
Stage 2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	5-10%	No individual, firm or business that regularly washes vehicles for remuneration or provides facilities for customers to do so through coin operated machinery shall be permitted to operate such a business unless their place of business is equipped and operating to approved standards with equipment to recycle water for use within their facility.	Yes
Stage 2	Other water feature or swimming pool restriction	5-10%	The refilling or adding of water to swimming pools is prohibited except on designated outdoor water use days, which is restricted between the hours of 10am and 6 pm.	Yes
Stage 2	Water Features - Restrict water use for decorative water features, such as fountains	5-10%	Any non-business, operation related pond, ornamental fountain or other structure making similar use of water is prohibited.	Yes
Stage 2	Landscape - Prohibit certain types of landscape irrigation	5-10%	The irrigation of golf course fairways is prohibited. This section shall not apply to the irrigation of any golf course solely with available non-potable or reclaimed wastewater.	Yes
Stage 2	Other	5-10%	The use of water from fire hydrants shall be limited to firefighting and emergency related activities and/or other activities necessary to maintain the health, safety, and welfare of the citizens of the San Antonio Heights. This restriction shall not apply to businesses, which require the use of water for land development and building construction processes with prior written approval by the Water Company.	Yes

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
Stage 3	Landscape - Limit landscape irrigation to specific days	10-301 %	Outdoor irrigation of landscape by sprinklers is permitted only on Wednesday and Sunday for those locations having street address with an even last digit. Outdoor irrigation by sprinklers is permitted only on Tuesday and Saturday for those locations having a street address with an odd last digit. Outdoor irrigation for locations not having a street address shall occur on Wednesday and Sunday if located west of San Antonio Avenue or only on Tuesday and Saturday if located east of San Antonio Avenue.	Yes
Stage 3	Landscape - Other landscape restriction or prohibition	10-30%	No outdoor irrigation shall take place between 6:00 a.m. until one (1) hour before sundown.	Yes
Stage 3	Other	10-30%	The washing of automobiles, trucks, trailers, boats, airplanes and other types of equipment (mobile or otherwise) is prohibited except on the designated outdoor water use days pursuant to section 7734.040 between the hours of 12:00 midnight to 12:00 noon and sundown to 12:00 midnight. Such washing, when allowed, shall be done with a hand held bucket or hand held hose equipped with a positive shutoff nozzle for quick rinses. The nozzle shall be removed when the hose is not in use to ensure the water supply is shutoff.	Yes
Stage 3	Other	10-30%	Trucks, trailers and other types of mobile equipment (such as garbage trucks and vehicles used to transport food and other perishables) when said washing is necessary in order to protect the health, safety and welfare of the public, shall be restricted to the hours of sundown to noon. Such washing, when allowed, shall be done with a hand held bucket or hand held hose equipped with a positive shutoff nozzle for quick rinses. The nozzle shall be removed when the hose is not in use.	Yes
Stage 3	Water Features - Restrict water use for decorative water features, such as fountains	10-30%	Any non-business, operation related pond, ornamental fountain or other structure making similar use of water is prohibited.	Yes
Stage 3	Landscape - Other landscape restriction or prohibition	10-30%	The waters of golf course tee areas and fairways is prohibited unless done with reclaimed wastewater.	Yes

SHORTAGE LEVEL	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
Stage 3	Other water feature or swimming pool restriction	10-30%	The refilling or adding of water to existing swimming pools is prohibited except on designated outdoor water use days which shall be the same days as outdoor water is permitted pursuant to section 7734.040. New pool construction filling shall be by permit only	Yes
Stage 4	Landscape - Limit landscape irrigation to specific days	30-50%	Outdoor irrigation of landscape by sprinklers is permitted only on Sunday for those locations having street address with an even last digit. Outdoor irrigation by sprinklers is permitted only on Saturday for those locations having a street address with an odd last digit. Outdoor irrigation for locations not having a street address shall occur on Sunday if located west of San Antonio Avenue or only on Tuesday and Saturday if located east of San Antonio Avenue	Yes
Stage 4	Landscape - Limit landscape irrigation to specific times	30-50%	No outdoor irrigation shall take place between 6:00 a.m. until one (1) hour before sundown	Yes
Stage 4	Other	30-50%	The washing of automobiles, trucks, trailers, boats, airplanes, and other types of equipment (mobile or otherwise) is prohibited	Yes
Stage 4	Other water feature or swimming pool restriction	30-50%	Any non-business, operation related pond, ornamental fountain or other structure making similar use of water is prohibited	Yes
Stage 4	Other	30-50%	Washing sidewalks, driveways, public and private parking areas, tennis courts, patios, or other paved areas, except to alleviate an immediate health hazard is prohibited	Yes

1.4.2 Supply Augmentation

SAWCo maintains interconnections with the City of Upland, as well as the Monte Vista Water District (MVWD) and the City of Ontario through the Water Facilities Authority (WFA). The WFA is a Joint Powers Authority composed of the cities of Chino, Chino Hills, Ontario, and Upland and the MVWD. The WFA owns and operates a surface water treatment plant within the City of Upland that primarily treats imported water supplies from Metropolitan Water District of Southern California (Metropolitan). SAWCo's interconnection with the City of Upland could potentially provide the ability to negotiate imported water deliveries via the WFA and wheeled through this existing interconnection.

Table 4. DWR 8-3 Supply Augmentation and Other Actions

SHORTAGE LEVEL	SUPPLY AUGMENTATION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE
Stage 2	Other purchases	0-100%	Negotiate imported water deliveries through the Water Facilities Authority
Stage 3	Other purchases	0-100%	Negotiate imported water deliveries through the Water Facilities Authority
Stage 4	Other purchases	0-100%	Negotiate imported water deliveries through the Water Facilities Authority

1.4.3 Operational Changes

SAWCo operates its system as efficiently as possible. In the event of a water shortage emergency, it is likely that surface water from the San Antonio Creek and percolated water from the San Antonio Tunnel would be vastly reduced. As a result, SAWCo would focus operations on well extractions to meet demands.

1.4.4 Additional Mandatory Restrictions

SAWCo also implements several measures at all times to avoid water waste, which include:

- Prohibit washing of sidewalks, driveways, public and private parking areas and all other impervious hard surfaced areas by direct hosing when runoff water directly flows to a gutter or storm drain, except as may be necessary to properly dispose of flammable or other dangerous liquids or substances, wash away spills that present a trip and fall hazard, or to prevent or eliminate materials dangerous to the public health and safety;
- Prohibit excessive or unreasonable run-off or unreasonable spray of the areas being watered;
- Prohibit outdoor irrigation by sprinklers between 10 AM and 6 PM. Shareholders are encouraged to avoid the use of sprinklers on windy days;
- Prohibit the washing of automobiles, trucks, trailers, boats, airplanes, and other types of equipment (mobile or otherwise) unless completed with a hand-held bucket or hand-held hose equipped with a positive shutoff nozzle for quick rinses.

1.4.5 Seismic Risk Assessment, Mitigation Plan, and Emergency Response Plan

In addition to responding to drought conditions, SAWCo's WSCP can be used to respond to emergency or catastrophic conditions that impact the availability of the SAWCo's water supplies and/or the ability to deliver water within the service area. Besides drought, water supply may experience a catastrophic interruption as a result of natural disasters, such as an earthquake, wildfire, mudslide, or a regional power outage.

Planning and response measures in the event of an interruption to the water supply include the following:

- In advance of a known threat to the water and distribution system, such as a wildfire, distribution reservoirs will be filled to capacity, and any reservoir out of service will be put back into service.
- Portable generators will be deployed to critical facilities lacking emergency backup power.
- Supervisory Control and Data Acquisition (SCADA) will be used throughout the distribution system to monitor system problems, whether they be minor day-to-day problems or major disruptions.
- Distribution system crews are trained in pipe repair and replacement as a part of their normal duties and will be continually ready to perform such work on an emergency basis as needed.
- In the occurrence of a catastrophic event, SAWCo staff will be prepared to mobilize to respond to emergent issues.
- Distribution system repairs will be prioritized to best meet critical needs, including water for firefighting, and health and safety needs.
- A portion of the available potable supply will be reserved for drinking-water purposes in the event of prolonged interruption.
- In the event of distribution system failure, a clear message for timely information dissemination to the public will be developed that includes the nature of the catastrophic event, status of the distribution system, water use prohibitions, allowable water uses, potential need to boil drinking water prior to consumption, and location and availability of emergency drinking water.

In 2021, SAWCo completed a Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) in accordance with America's Water Infrastructure Act (AWIA) of 2018. The purpose of the RRA and ERP is to meet the AWIA compliance requirements and plan for long-term resilience of SAWCo's infrastructure. The RRA assesses SAWCo's water system to identify critical assets and processes that may be vulnerable to human and natural hazards and to identify measures that can be taken to reduce risk and enhance resilience from service disruption for the benefit of customers. The RRA identifies and characterizes both infrastructure-specific and system-wide vulnerabilities and threats and quantifies the consequences of disruption. The RRA also identifies various options (and constraints) in addressing and mitigating risk. The RRA, in conjunction with the ERP, charts a course for water system resilience. The RRA also provided various recommendations to increase the reliability of SAWCo's system. Since critical pieces of infrastructure and specific vulnerabilities are detailed in the RRA and ERP, the contents of the document are confidential and for use by SAWCo's staff only. However, SAWCo can confirm that these plans meet the requirements set forth by AWIA and evaluate seismic risks and mitigation actions to SAWCo's infrastructure.

SAWCo certified with the U.S. Environmental Protection Agency that their RRA was compliant with all AWIA requirements on June 30, 2021, and will certify their ERP by December 31, 2021, meeting all federal deadlines.

1.4.6 Shortage Response Action Effectiveness

SAWCo has estimated the effectiveness of shortage response actions when data pertaining to such actions is available. Estimates of the effectiveness for actions are included in Table 3. It is expected that response actions effectiveness is also a result of successful communication and outreach efforts.

1.5 Communication Protocols

SAWCo publishes seasonal newsletters to inform customers of SAWCo's work. During a water shortage, SAWCo may publish information such as shortage stage and demand reduction measures in these newsletters. In addition, SAWCo will inform customers through informational bill stuffers. In more severe shortage stages, SAWCo would implement additional communication outlets, such as local newspaper postings, Facebook postings and notifications, and postings through local homeowners' associations and the San Antonio Heights Association newsletters.

In addition, SAWCo's newly deployed Automated Meter Reading (AMR) system will include a web portal where shareholders can enable notifications for using water over entitlement.

1.6 Compliance and Enforcement

SAWCo may administer penalties for shareholders who are not in compliance with this WSCP and engage in knowingly water waste activities during any calendar year or declared shortage stage, whichever time period is shorter in duration:

- **First Violation:** guilty of an infraction offense and punished by a fine not less than twenty-five dollars (\$25) but not exceeding fifty dollars (\$50)
- **Second Violation:** guilty of an infraction offense and punished by a fine not less than fifty dollars (\$50) but not exceeding one hundred dollars (\$100)
- **Third Violation:** guilty of a misdemeanor offense and punished by a fine not less than five hundred dollars (\$500) but not exceeded one thousand dollars (\$1,000)

In addition, the General Manager may enact other penalties and restrictive measures that are intended to restrict further water waste of shareholders that continue to violate the policies and procedures outlined in this plan. The General Manager may select to implement any of the following measures, or others not listed here, such as the placement of a flow restricting device upon the water service, locking off of water meter, removal of water meter, and shutting off of the service line valve.

1.7 Legal Authorities

SAWCo first established its WSCP by Resolution No. 2006-06-03, adopted at a Board meeting on September 19, 2006. Resolution No. 2006-06-03 was created to ensure responsible water management of SAWCo and its customers and promote water conservation. This Resolution provides the Board with the legal authority to declare a water shortage emergency and implement appropriate measures to mitigate a supply shortage.

1.8 Financial Consequences of WSCP

SAWCo's Bylaws specify that "all water shall be supplied at cost"; therefore, SAWCo must supply the corresponding water associated with each customer's shares. SAWCo may apply reductions to

entitlement in extreme water shortages, which would decrease SAWCo's revenue. As a small water agency, SAWCo does not have the resources to hire additional staff to assist with implementation of this WSCP and various response actions.

SAWCo has developed reserves for Master Plan projects, emergency occurrences, and operating expenses, as outlined in Resolution No. 2007-01-01. This reserve was first established in July 1994 to mitigate impacts to SAWCo and ensure that with reduced deliveries, SAWCo could continue to provide services with a buffer for emergency situations. A portion of the reserve fund is allocated for emergency water purchases in the event SAWCo were to lose a water supply source.

1.9 Monitoring and Reporting

As mentioned, SAWCo has recently replaced all customer and system meters and upgraded to an AMR system. AMR meters provide daily readings that will allow SAWCo to quickly respond to large readings and correct any issues, such as system leaks or inform customers of demand reduction actions or rebates to limit water use. In addition, the AMR meters will be connected to a website where shareholders can track their own water use and enable notifications. Shareholders can be notified of excessive water use over their entitlement.

1.10 WSCP Refinement Procedures

The WSCP is best prepared and implemented as an adaptive management plan. SAWCo will use results obtained from its monitoring and reporting program to evaluate any needs for revisions. Potential changes to the WSCP that would warrant an update include, but are not limited to, any changes to trigger conditions, changes to the shortage stage structure, changes to entitlement, and/or changes to customer reduction actions.

Any prospective changes to the WSCP would need to be presented to SAWCo's Board of Directors (Board) for approval. SAWCo will hold a public hearing, obtain any comments, and formally adopt the updated WSCP. Notices for refinement and the public hearing date will be published in the local newspaper in advance of any public meetings.

1.11 Special Water Feature Distinction

Water Code Section 10623 (b) now requires that suppliers analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code. SAWCo prohibits water used for any non-business, operation related pond, ornamental fountain, or other similar structure for aesthetic use in shortage stages 2-4.

1.12 Plan Adoption, Submittal, and Availability

The WSCP will be presented for adoption to SAWCo's Board at a public meeting. The Board and members of the public may submit any comments prior to approval and adoption. The WSCP will be submitted to DWR at the same time as the 2020 Urban Water Management Plan.

The WSCP will be made available to all staff, customers, and any affected cities, counties, or other members of the public through SAWCo's website.

1.13 Resources and References

- California Water Efficiency Partnership. (2021). *Jumpstart Water Shortage Toolkit Tool#1: Model Water Shortage Contingency Plans*. Sacramento: California Water Efficiency Partnership.
- San Antonio Water Company. (n.d.). *Amended and Restated Bylaws of San Antonio Water Company*.
- Texas Living Waters Project. (2018). *Water Conservation by the Yard: A Statewide Analysis of Outdoor Water Savings Potential*. Austin: Texas Living Waters Project, Sierra Club, National Wildlife Federation. Retrieved from Texas Living Waters Project.
- United States Environmental Protection Agency. (2012). *Saving Water in Restaurants*. United States Environmental Protection Agency.
- United States Environmental Protection Agency, Office of Water. (2002). *Cases in Water Conservation: How Efficiency Programs Help Water Utilities Save Water and Avoid Costs*. United States Environmental Protection Agency.

Item Title: Positive Pay

Purpose:

To discuss past fraudulent activity and consider utilizing Positive Pay for future bank transactions.

Issues:

Should the Company consider utilizing another form of protection against fraudulent bank activity?

Manager's Recommendation:

Authorize staff to proceed in utilizing Positive Pay as a form of protection against fraudulent bank activity.

Background:

- 12/7/2020 – Fraudulent bank activity noted on 11/23/20 - Geico payment made through ACH debit \$1,434.99 – reported to bank
- Bank instructs us to get new bank account and suggests in future to utilize Positive Pay
- Positive Pay usually costs but due to our bank transaction activity and amount, the service will be at no charge

The Company has made all the necessary changes to a new checking account and is now in the position to utilize the Positive Pay fraud protection. To start the process will require the Secretary's signature on a form and staff thought it would be prudent to bring before the Board for action.

Previous Action:

None

Impact on Budget:

None

Item Title: Company Treatment Plant

Purpose:

To conduct a budgetary review of a company treatment plant.

Issues:

Should the Company consider building a water treatment plant?

Manager's Recommendation:

Authorize staff to execute a time and material contract with TKE Engineering with a not-to-exceed cost of \$24,500, per PROC recommendation.

Background:

The Company's main irrigation system primarily receives water from surface diversions in the San Antonio Canyon. Most of the irrigation water is provided to the City of Upland's treatment plant located just below the San Antonio Canyon dam. The city's treatment plant has a minimum operating limit of 1.0 MGD. This restriction makes it difficult for the City to receive their full entitlement of SAWCO water when canyon flows seasonally dip and also in extended periods of drought.

Staff invited three firms to provide a short-form proposal to review budgetary-level issues regarding the construction of a facility capable of treating water up to 1.0 MGD. The intent of such a facility would be to capture and treat canyon surface water that bypasses the City's treatment plant.

Three proposals were received on Friday, August 20th from TKE Engineering, WSC Engineering and IEC Engineering. Staff reviewed the proposals with the PROC on Tuesday, August 24th. The consensus was that all three firms are fully qualified to conduct the study. After further discussion the PROC made a unanimous motion to move TKE Engineering's proposal forward to the full Board as the most responsive firm.

Previous Action:

None

Impact on Budget:

A time and material contract not to exceed \$24,500.



San Antonio Water Company

October 25, 1882

Original Ontario Colony lands

A REQUEST FOR PROPOSALS

TO PROVIDE CONSULTING SERVICES TO THE SAN ANTONIO WATER COMPANY

PROJECT TITLE:

Budgetary Study of a 1.0 MGD Treatment System

RESPONSE DUE BEFORE 3:00 PM

On August 20, 2021

Introduction

The San Antonio Water Company is soliciting proposals from select invited firms to prepare a Technical Memorandum discussing pros and cons of constructing a 1 MGD treatment system.

General Information

Since 1882 the San Antonio Water Company has consistently provided water service to its shareholders. The Company does not import any water. Instead we are dependent on our local San Antonio Canyon and Cucamonga Canyon watersheds and downstream groundwater basins.

Currently, our shareholders include most residents of the unincorporated area of San Antonio Heights, the Cities of Upland and Ontario, the Monte Vista Water District, local quarries and the proud heritage of remaining grove irrigators. Annual shareholder water entitlements are established based on projected availability.

The Company provides water through two separate systems: domestic and irrigation.

The domestic system receives the majority of its water through the San Antonio tunnel. Groundwater percolating through the alluvium collects in the tunnel and, after chlorination provides 4-log inactivation, is channeled into the Company's potable water system through the Company's Forebay facility.

The domestic water system provides service to the San Antonio Heights, also known as our Basic Service Area. Consisting primarily of large residential lots, the Heights is an unincorporated area of San Bernardino County approximately 2.6 square miles in size located immediately north of the City of Upland. The Company provides water to individual residential lots through 1,200 domestic meters.

The main irrigation system primarily receives water from surface water diversions in the San Antonio Canyon and provides service to the Company's 'extended' service area. Shareholders in the extended service area include municipal and private companies. Most of the distributed irrigation water is provided to the City of Upland's treatment plant located just below the San Antonio Canyon dam. The city's treatment plant has a minimum operating limit of 1.0 MGD. This restriction makes it difficult for the City to receive their full entitlement of SAWCO water when canyon flows seasonally dip and in extended periods of drought. Water that bypasses the city's treatment plant is typically sent to the Company's Forebay facility where it is diverted to groundwater settling basins, assuming there are no irrigation or rock quarry needs.

A separate Company irrigation system currently provides groundwater from three wells to the Water Facilities Authority (WFA) for treatment and distribution to shareholders who also participate in the WFA (Monte Vista Water District and City of Ontario). The City of Upland also participates in WFA but does not currently receive any Company water through the WFA. The Company's irrigation system delivering water from San Antonio Canyon runs up to the Company owned property on Benson Avenue just south of the WFA facility.

Project Scope of Services

Task 1 – Project Management

Provide overall project management services including:

- Quality assurance/ quality control

- Teleconferences and meetings at appropriate intervals to keep Company staff updated on progress and address any needed management level decisions.

Task 2 – Data Gathering and System Evaluation Criteria

Consultant shall propose a mechanism to collaboratively work with staff to review, prioritize, sequence and implement dependent tasks.

Task 3 – Technical Memorandum

Develop Technical Memorandum including but not limited to discussions of the following:

- Consider how often the treatment plant would operate based on historical canyon flows. It should be assumed that canyon flows between 1 MGD and 2 MGD would be wholly delivered to the City’s treatment plant. Below 1 MGD would be fully treatable by SAWCo. Flows above 2 MGD would be split, depending on seasonality and City demand.
- Rank potential locations for system installation to maximize value to the largest number of shareholders with discussion regarding pros and cons of each:
 - Company’s Forebay facility where the domestic and irrigation systems both exist
 - Company’s Benson Avenue property just south of Water Facility Association treatment plant where multiple municipal shareholders already connect to the Water Facilities Authority (WFA).
- Rank available treatment options with discussion regarding pros and cons of each.
- For the highest ranked treatment option at the highest ranked location:
 - Provide budgetary numbers for construction and operation of plant, any associated facilities and pipelines.
 - Discuss how the treatment plant would deliver water to shareholders
 - List permitting and operational requirements.
 - Provide budgetary schedule for construction.

Schedule

The Company anticipates the following timeline and key milestones for award of the project:

Proposal Due Date	August 20, 2021
Consultant’s Notification	August 25, 2021

Proposal Requirements

The Company expects a short-form proposal not to exceed 4 pages, excluding resumes, proposed schedule and fee schedule. No other documents will be reviewed. Please do not submit additional material. Responses to this RFP shall be in the following order and shall include:

Project Understanding and Approach

Proposer shall demonstrate its preliminary understanding of the project by providing a clear and concise description of the project and major issues, based on the information provided in this RFP.

Proposer shall clearly define the tasks and activities necessary to meet the objectives outlined in the scope of work:

- I. Description of the tasks and activities, the methodology that will be used to accomplish them.
- II. Description of the products that would result from each task and activity.
- III. Identification of points of input and review with Company staff.
- IV. Proposed project schedule identifying key tasks, their expected duration, and milestone dates.
- V. Proposers are invited to suggest additional (optional) work tasks that could be performed in conjunction with or subsequent to the scope of work. Any such tasks are to be described as optional and the benefits of performing such tasks shall be described.

Proposed Total Professional Fee and Fee Schedule

Proposed fee shall not be the sole basis of award but will be used to evaluate the Consultant's understanding of the Scope of Work.

Include the hourly rates of all staff that will charge to the project.

Selection Process and Schedule

Key senior staff will independently review and rank each proposal. Based on an aggregate of those reviews, the Company will likely enter negotiations with the top ranked firm.

At this time, the Company contemplates the use of a Time and Material Not to Exceed contract for the services requested. Negotiations will cover scope of work, contract terms and conditions, attendance requirements, and appropriateness of the proposed fee.

After negotiating a proposed agreement that is fair and reasonable the General Manager will execute a contract with the most responsive firm.

Submittal Requirements

The proposal shall be signed (digital signature is acceptable) by an individual, partner, officer or officers authorized to execute legal documents on behalf of the Firm.

The Response Proposal, including fee estimate must be emailed to blee@sawaterco.com no later than 3:00 p.m. local time, on or before August 20, 2021.



San Antonio
Water Cmpny

BUDGETARY STUDY of a 1.0 MGD Treatment System

August 20, 2021



Prepared for:

San Antonio Water Company
139 North Euclid Avenue
Upland, California 91786

Prepared by:

TKE Engineering, Inc.
2305 Chicago Avenue
Riverside, CA 92507
Client Contact: Steven Ledbetter P.E.
Phone: (951)680-0440
Email: sledbetter@tkeengineering.com

FIRM QUALIFICATIONS AND SERVICES OVERVIEW

TKE Engineering, Inc. (TKE) is a full-service, local, multi-disciplinary firm with a wide range of experience in privately and publicly funded construction projects for more than twenty-one years. The breadth of experience and technical skill of our staff enable us to manage a wide variety of projects, ranging from major infrastructure to the restoration and rehabilitation of significant historical structures.

TKE is also experienced in Bid and Contract Administration. We ensure that all work is completed in accordance with contract specifications, terms, conditions, state and federal laws and regulations, and client policy.

Our management portfolio includes:

- △ Recycled Water Pipelines
- △ Water/Wastewater Pipelines
- △ Facilities
- △ Street projects
- △ Utilities
- △ Major Infrastructure Projects
- △ Reconstruction and rehabilitation of facilities
- △ Parking Lot projects
- △ Park projects

CIVIL ENGINEERING

TKE's Civil Engineering projects have included:

- △ Potable and Recycled Water Infrastructure Funding, Planning, Design, Bidding and Construction
- △ Sanitary Sewer Infrastructure Funding, Planning, Design, Bidding and Construction
- △ Sewer and Water System Hydraulic Analysis
- △ Infrastructure Master Planning/Capital Improvement Program (CIPs) development and management
- △ Hydrologic Studies/Hydraulic Design
- △ Urban Water Management Plans
- △ Water Resource Studies

- △ Master Plans
- △ Water Supply Assessments
- △ Rate Studies
- △ Storm Water Pollution Prevention Plans (SWPPP)
- △ Sediment and Erosion Control Facilities
- △ Hydromodification Studies/Water Quality Management Plans (WQMPs)
- △ Transportation Improvements

PROJECT UNDERSTANDING AND APPROACH

1. PROJECT UNDERSTANDING

San Antonio Water Company (SAWCO) is seeking a qualified consultant partner to prepare a Technical Memorandum explaining the benefits and disadvantages of constructing a 1.0 MGD treatment system. More specifically, identify treatment options for the varying surface water flow diversions from the San Antonio Canyon. The selected consultant is expected to provide project management, data gathering and development of system evaluation criteria, as well as a preparing a technical memorandum of findings and recommendations.

2. PROJECT APPROACH / SCOPE OF WORK

TASK NO. 1 PROJECT MANAGEMENT

TKE will manage project delivery with our proven approach. It includes our project manager, Steven Ledbetter, P.E., being responsible for all services provided by the project team. His long history of managing projects has resulted in numerous successful public works projects. He has managed numerous preliminary design reports, feasibility studies, water system analysis reports and master plan documents for Mission Springs Water District, City of San Bernardino Municipal Water Department, Coachella Water Authority, West Valley Water District, City of Hesperia, City of El Monte, and others. He will attend all meetings on behalf of the project team.

Project management includes as needed meetings/communications with staff to ensure critical decisions are presented to SAWCO for direction at appropriate times, meetings and communications with the project team, field reviews of the site, meeting with regulatory agencies, and regular review of project schedule and budget.

Upon selection for this project, TKE shall initiate a project kick off meeting with SAWCO's General Manager and potential Stakeholders to discuss project parameters and the optimal delivery options preferred by all parties.

In addition, we propose to meet SAWCO's staff to review project obligations and to discuss all project requirements in detail including objectives, schedule, alternative analysis, SAWCO strategies, alternative source opportunities and budget constraints. TKE's Project Manager will attend the meeting to determine project protocol and obtain SAWCO records required for the project development, see more below.

DELIVERABLES:

Meeting Agenda and Minutes, Monthly Progress Reports, and Project Schedule

TASK NO. 2 DATA GATHERING AND SYSTEM EVALUATION CRITERIA

We will thoroughly research existing SAWCO records and acquire copies of all available records. The purpose of the records research is to assemble records and mapping to establish planning document understanding, locations of all existing utilities and improvements as well as existing rights-of-way and easement areas for potential alignment and site development. The research will consist of assembling copies of assessors' maps, tract maps, parcel maps, easement documents, SAWCO mapping, SAWCO planning documents, and utility drawings. TKE anticipates receiving the following information from SAWCO:

- △ Area Mapping
- △ Water Demands
- △ Historic Surface Water Flow and Variability
- △ Distribution Piping and Facility Maps
- △ Master Plan

- △ Electricity Rates
- △ Physical Locations of Improvements

As part of our review, TKE will evaluate existing conditions and develop system evaluation criteria with SAWCO staff. It's imperative that SAWCO's needs and desires for the proposed treatment plant are captured and used to inform the decision-making process.

DELIVERABLES:

Records Database and System Evaluation Criteria

TASK NO. 3 TECHNICAL MEMORANDUM

During the evaluation process, TKE will develop the scope of work for various treatment alternative required to adequately receive and treat up to 1.0 MGD fo surface water. We will evaluate factors such as site locations, existing system capacities, connections, fees, pumping criteria, piping requirements, treatment technology, flow variability, power consumption, operations and maintenance for each alternative. The scope will include a complete list of all capital improvements required. Upon completion of the capital improvements development for each alternative, a detailed cost estimate will be prepared.

The alternative development list would include analysis of cost effectiveness, location, aesthetic limitations, capacity and connection analysis, and economic benefits.

Upon the completion of cost developments for each alternative, a benefit cost analysis will be performed using the estimated construction costs, power costs and operations and maintenance costs annualized over a 20-year period. The benefit cost analysis will determine which alternatives can provide the most cost-efficient required water treatment. The benefit cost analysis will identify to the value to SAWCOs shareholders for each alternative.

Upon completion of the benefit cost analysis documents, TKE will prepare a preliminary technical memorandum summarizing our findings. The report will include an executive summary, background, project objectives, alternative analysis, alternative evaluation, benefit cost analysis, conclusions and recommendations. We will forward the report and calculations to the SAWCO for review.



After SAWCO has completed its review, we will meet with SAWCO Staff to acquire Staff comments.

Upon receiving comments from the SAWCO, TKE will prepare required additions, changes and corrections to the technical memorandum and calculations for finalization. The final report will be submitted to the SAWCO in hard copy format along with a digital copy in pdf format.

DELIVERABLES:

Draft and Final Technical Memorandum, Supporting Calculations and Technical Data

3 . QUALITY ASSURANCE / QUALITY CONTROL

TKE takes pride in our reputation for thoroughness, rapid turnaround, cost efficiency and overall quality of work, and believes that a high level of quality is needed on all aspects of projects. High quality design review and inspection yields the following tangible results:

- △ Ease of oversight
- △ Smoother processing
- △ Healthy number of bidders
- △ Consistent bids
- △ Minimized construction support cost

TKE's proposal is signed by a principal of the firm who is authorized to bind TKE to the terms of the proposal. Thank you for your consideration. If you have any questions, please call me at (951) 680-0440 or e-mail me at sledbetter@tkeengineering.com.

Sincerely,

Steven Ledbetter, P.E.
Vice President
TKE Engineering, Inc.

- △ Absence of design-related change orders
- △ Reduced claims and dispute resolution costs

TKE believes that the most successful quality assurance program is one that is applied inherently throughout the entire management and inspection process. This program requires not only formal procedures for inspection, but encourages the conscientious effort of experienced people to always "create quality" in every task performed.

This program has become a natural element in all aspects of TKE's management activities, and will guide our work on this contract:

- △ Staff training and development
- △ Assignment of experienced staff
- △ Continuity of staffing
- △ Project-specific work plan
- △ Schedule compliance
- △ Comprehensive field review and compilation of site data
- △ Established checking procedures, including independent in-house QA/QC review
- △ Dual (independent) quantity estimates

This Quality Assurance/Quality Control program is in place to ensure that project construction exceeds the standards of our clients and that we will deliver the project on schedule and within budget.

APPENDICES

A. RESUMES

B. SCHEDULE





MICHAEL THORNTON, P.E., P.L.S., M.S.

Principal-in-Charge

EDUCATION

MS, Civil Engineering, California State University, Long Beach
BS, Civil Engineering, California State Polytechnic University, Pomona

CERTIFICATIONS

Registered Civil Engineer, PE 44226 (CA)
Professional Land Surveyor, LS 6867 (CA)

AFFILIATIONS

American Society of Civil Engineers
American Water Works Association
California Rural Water Association
American Public Works Association
American Council of Engineering Companies

Mr. Thornton, TKE's President, is in charge of all TKE projects. He has over 33 years of experience in engineering planning, design, land surveying and construction management for public works projects. He has worked on a variety of public works engineering projects including water system improvements, sewer system improvements, street improvements, park improvements, bike trail improvements, drainage improvements, and reclaimed water system improvements projects. Mr. Thornton has been responsible for managing including funding administration, planning, evaluating, and designing these projects and has provided construction engineering and surveying services for many of these same projects.

DETAILED PROJECT EXPERIENCE

- **Mission Springs Water District** - Mr. Thornton was serving Mission Springs Water District and its District Engineer for a period of 8 years. He worked with staff to manage more than \$20 million in water and wastewater improvement projects. Services included budget development and management, management of other consultants and presentations to their board of directors.
- **Mission Creek and Garnet Hill Water Management Plan, Mission Springs Water District** – Mr. Thornton represented Mission Springs Water District (MSWD) at technical coordination meetings during development of the Water Management Plan (WMP). His responsibilities included representing MSWD at the meetings, review of technical memorandums and other project deliverables, review of modeling results, preparation of reports and presentation for incorporation in the final report, review and comments to the final report. In addition, he provided numerous presentations to the MSWD's board of directors during plan development as well as during the plan adoption.
- **I-15 Sewer Lift Station and Water Booster Station, City of Hesperia** - Mr. Ledbetter is the Principal in Charge for the I-15 Sewer Lift Station and Water Booster Station project. This project consists of the design and construction of a sewer lift station and water booster station to provide service to developments along the I-15 freeway corridor. Through a phased approach, TKE first developed a sewer and water feasibility study to serve the area; followed by preparing the design and contract documents for sewer conveyance, and water distribution and transmission systems; and is now preparing the design and contract documents for the lift station and booster station. The lift station includes two 25 HP VFD submersible impeller pumps, wet well, piping, valves, manholes, electrical, motor control center and electrical building, and associated site improvements. The separate booster station, located at an existing reservoir site, includes three 250 HP VFD pumps, two 50 HP VFD pumps, one 20 HP pump, hydro-pneumatic system, piping, valves, electrical, prefabricated building, emergency generator (600 kW), and associated site improvements.

- **2035 General Plan Update Water Supply Assessment, City of Coachella, CA** – The proposed 2035 General Plan Update aids the City in establishing its new identity, an identity that will be realized during the next growth cycle. The 2035 General Plan Update is the community’s statement of the community’s values and its vision for its future. As part of that vision, a CEQA environmental review is prepared to evaluate impacts related to future growth outlined in the General Plan. Mr. Thornton was the Principal-in-Charge and was responsible for directing staff in preparing a water supply assessment for inclusion as part of the General Plan Update CEQA. In accordance with SB 610, TKE provided an assessment of water supplies available to serve all development up to 2035, including normal, single dry, and multiple dry water years. Services included records research, water supply and demand analysis, report preparation, and community meetings.
- **2018 Water Master Plan Update, City of Coachella, CA** - The City of Coachella retained TKE to prepare an update to the City’s previous 2007 Water Master Plan (WMP). The WMP evaluated the City’s existing water system and planned the facilities to meet increase future water demands. The evaluation included future planned development projects and the City’s most current General Plan Update report. Mr. Thornton provided input analysis for water model development and assisted with preparing the update report; including land use and population projections, and a capital improvement plan forecasting out to the year 2035. The project included significant coordination with the City and the future La Entrada Development team.
- **Horton Wastewater Treatment Plant Tertiary Filtration System, Desert Hot Springs, CA** – Mr. Thornton is the Principal in Charge for the preparation of Preliminary Design Report and estimates for the construction of an Title 22 tertiary treatment facility for the District’s existing Horton Wastewater Treatment Plant. The report defined the feasibility and cost effectiveness to alleviate existing and future secondary effluent disposal deficiencies at the Plant. The analysis focused on the installation of tertiary filters to reduce suspended solids prior to land disposal. In addition, the report evaluated the ability to use the proposed tertiary filters along with disinfection facilities to meet Title 22 recycled water standards in the future.
- **Eastgate Building No. 1 Water Supply Assessment, San Bernardino, CA** – The proposed Eastgate Building No. 1 development project includes 658,500 square feet of industrial floor space on approximately 97.48 acres of land. The development will consist of a warehouse building for air cargo use located at San Bernardino International Airport. The development has an estimated water demand of 223 acre-feet per year. As Principle in Charge, Mr. Thornton is providing an assessment of the water supplies available to serve the development over a 20-year period, including normal, single dry, and multiple dry water years.



MR. STEVEN LEDBETTER, P.E.

TKE Engineering, Inc.

Project Manager

EDUCATION

BS, Civil Engineering (Environmental),
California State Polytechnic University,
Pomona

REGISTRATIONS

P.E. License Number 84044 (CA)

CERTIFICATIONS

Certificate (2010), Caltrans 24 Hour
Training for Water Pollution Control
Managers

AFFILIATIONS

American Society of Civil Engineers –
San Bernardino and Riverside Counties
Branch

American Public Works Association –
Coachella Valley

Mr. Ledbetter has over 19 years of professional experience in the civil engineering industry. He has handled various critical and challenging projects from planning through design and implementation; all while ensuring that projects are executed as per specification in the stipulated time with quality. He has a well-rounded background with experience in: preparation and analysis of street and utility improvement plans and specifications including potable and non-potable water, wastewater, and drainage; utility master planning including computer modeling, analysis, and report preparation; water resource planning and management including feasibility studies, urban water management planning, water supply assessments and verifications, integrated regional water management planning, and groundwater management planning; storm water compliance reporting including water quality management plans and storm water pollution prevention plans and; and grant writing and administration for various State and Federal agency programs.

DETAILED PROJECT EXPERIENCE

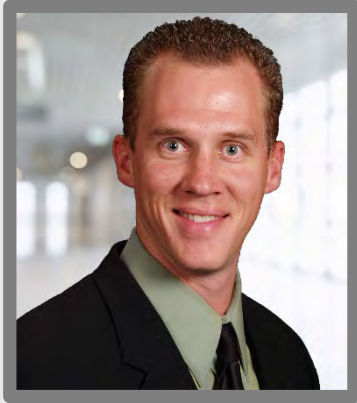
- **Regional Water Reclamation Program, Mission Springs Water District, CA** – Mr. Ledbetter is providing program management services for the development and construction of the District's Regional Water Reclamation Program (RWRP). The RWRP includes planning, design, and construction of a regional wastewater treatment plant, interceptor conveyance system, and local wastewater collection systems. Mr. Ledbetter is managing the completion of the RWRP, including: participation and management of funding acquisition; staff, board, consultant, funding agencies, and public coordination and communications; assessment district formation; State Revolving Fund (SRF) and grant application processing; State invoicing and reporting; environmental compliance processing; preliminary engineering preparation; plans, specifications, and cost estimates (PS&E) preparation; bidding and construction; and all related services to successfully complete the RWRP.
- **I-15 Sewer Lift Station and Water Booster Station, City of Hesperia** - Mr. Ledbetter is the Project Manager for the I-15 Sewer Lift Station and Water Booster Station project. This project consists of the design and construction of a sewer lift station and water booster station to provide service to developments along the I-15 freeway corridor. Through a phased approach, TKE first developed a sewer and water feasibility study to serve the area; followed by preparing the design and contract documents for sewer conveyance, and water distribution and transmission systems; and is now preparing the design and contract documents for the lift station and booster station. The lift station includes two 25 HP VFD submersible impeller pumps, wet well, piping, valves, manholes, electrical, motor control center and electrical building, and associated site improvements. The separate booster

station, located at an existing reservoir site, includes three 250 HP VFD pumps, two 50 HP VFD pumps, one 20 HP pump, hydro-pneumatic system, piping, valves, electrical, prefabricated building, emergency generator (600 kW), and associated site improvements.

- **Horton Wastewater Treatment Plant Tertiary Filtration System, Desert Hot Springs, CA** – Mr. Ledbetter is the project manager for the preparation of Preliminary Design Report and estimates for the construction of an Title 22 tertiary treatment facility for the District's existing Horton Wastewater Treatment Plant. The report defined the feasibility and cost effectiveness to alleviate existing and future secondary effluent disposal deficiencies at the Plant. The analysis focused on the installation of tertiary filters to reduce suspended solids prior to land disposal. In addition, the report evaluated the ability to use the proposed tertiary filters along with disinfection facilities to meet Title 22 recycled water standards in the future.
- **Sewer Feasibility Study, Bloomington CA** - Mr. Ledbetter was the project manager overseeing the completion of preliminary engineering analysis and preparation of a feasibility study to develop a wastewater collection system to serve the area on Bloomington, in the County of San Bernardino. The analysis included developing sub-areas, determining collection system alignments, pumping requirements, developing wastewater flowrates, pipe sizing, and cost estimation. The wastewater collection system includes over 57,000 linear feet of truck sewer mains, five (5) lift stations, and over 15,000 linear feet of force mains, at a total cost of over \$105 million.
- **Horton Wastewater Treatment Plant Odor Control, Desert Hot Springs, CA** - Mr. Ledbetter is the project manager for the preparation of plans, specifications, and estimates for the construction of an odor control system for the District's existing Horton Wastewater Treatment Plant. The proposed vapor phase odor control system will service the influent pump station and headworks facilities. The project will significantly reduce odor emissions to neighboring residential developments. The project includes coordination with the Regional Water Quality Control Board, Air Quality Management District, other agencies, vendors, and consultants. Services include records research, coordination with agencies, vendors, and consultants, design, cost estimating, technical and benefit cost analysis, regulatory agency coordination, permitting, bidding, construction management, construction staking, and inspection.
- **Moreno Valley General Plan Update Infrastructure Analysis, City of Moreno Valley, CA** - The City recently completed the process of updating their General Plan to aid in establishing its new identity, an identity that will be realized during the next growth cycle of 20-years. The General Plan update is the community's statement of its values and vision for the future. As part of that vision, TKE prepared a comprehensive infrastructure assessment. TKE is evaluating the adequacy and capability of the backbone infrastructure that is located within or is of benefit to the City's economic development target areas, and recommending appropriate regulatory and/or infrastructure improvements that would eliminate any infrastructure deficiencies identified for various alternatives. Mr. Ledbetter served as project manager for the infrastructure analysis efforts.
- **2018 Water Master Plan Update, City of Coachella, CA** - The City of Coachella retained TKE to prepare an update to the City's previous

2007 Water Master Plan (WMP). The WMP evaluated the City's existing water system and planned the facilities to meet increase future water demands. The evaluation included future planned development projects and the City's most current General Plan Update report. Mr. Ledbetter provided input analysis for water model development and assisted with preparing the update report; including land use and population projections, and a capital improvement plan forecasting out to the year 2035. The project included significant coordination with the City and the future La Entrada Development team.

- **Canyon Creek Resort Water Supply Assessment, Norco, CA** - The proposed Canyon Creek Resort development includes 551 dwelling units of low and medium density residential, hotel lodging, and 213 acres of open space within the eastern portion of the City of Norco. The development has an estimated water demand of 448 acre-feet per year. As project manager, Mr. Ledbetter is providing an assessment of the projects water demand and water supplies available to serve the development over a 20-year period, including normal, single dry, and multiple dry water years.
- **Sewer Master Plan Analysis, City of El Monte, CA** - Mr. Ledbetter provided design engineering, modeling, and analysis services on the Sewer Master Plan Update for the City of El Monte. This study includes approximately 9.67 square miles in an area located northwest of the Interstate 10 and 605 Freeways. The project services included meetings, records research, coordination with stakeholders and agencies, area map exhibit preparation, flow generation calculations, model preparation, flow monitoring, cost estimating, capital improvement programming and report preparation.
- **Ceres Economic Development Strategic Plan, City of Ceres, CA** - Mr. Ledbetter served as project manager in the preparation of an overview of the capability of the public infrastructure that is located within or is of benefit to the City's business development target areas and serve parcels that have business-oriented land-uses. The analysis highlighted all backbone infrastructure deficiencies within the business development target areas that could be eliminated as a part of the Economic Development Strategy. Backbone infrastructure projects include major street reconstructions, drainage, water and sewer improvements, underground utility projects, and other public facilities that were essential to the highest and best use of parcels that have business-oriented land uses.
- **Eastgate Building No. 1 Water Supply Assessment, San Bernardino, CA** - The proposed Eastgate Building No. 1 development project includes 658,500 square feet of industrial floor space on approximately 97.48 acres of land. The development will consist of a warehouse building for air cargo use located at San Bernardino International Airport. The development has an estimated water demand of 223 acre-feet per year. As project manager, Mr. Ledbetter provided an assessment of the water supplies available to serve the development over a 20-year period, including normal, single dry, and multiple dry water years.



TERRY RENNER, P.E., Q.S.D.

TKE Engineering, Inc.

Quality
Assurance/Quality
Control

EDUCATION

BS, Civil Engineering, California State Polytechnic University, Pomona

REGISTRATIONS

P.E. License Number 69984 (CA)
Qualified SWPPP Developer and Practitioner #24329

CERTIFICATIONS

Caltrans SWPPP Certified QSP/QSD Training

AFFILIATIONS

American Public Works Association
American Council of Engineering Companies of California

Mr. Renner is the Senior Vice President of TKE and has over 21 years of experience in civil engineering design, plan checking, project management and construction management of both development and public works infrastructure projects, including grading improvements, street and transportation improvements, traffic engineering, drainage improvements, water improvements, sewer improvements, facilities improvements and recreation improvements. He currently provides traffic and transportation engineering services to the cities of Fontana, Calimesa, Upland, Wildomar, Highland, and Adelanto. His experience includes services during pre-project planning, design, plan review, construction management and inspection, along with operations and maintenance. He also has experience conducting traffic studies, specialized access analysis, parking studies, signal operations, signal timing, and traffic control. He has successfully delivered a wide variety of complex and challenging projects and is dedicated to ensuring that the plans produced by TKE continue to exceed industry standards.

Through his career, Terry has accumulated extensive experience in Transportation and Traffic Engineering field. He has planned, designed and managed construction for more than 30 miles of roadways, street widening, medians, traffic calming, roundabouts, signing and striping modifications, bicycle lanes, and pedestrian facilities for major corridors, arterials, collectors and residential streets. Finally, Terry has overseen public works projects for signal modification and ITS improvements including projects in Caltrans jurisdiction and involving multi-agency coordination.

DETAILED PROJECT EXPERIENCE

- **New 0.5 MG Welded Steel Reservoir and Manganese Treatment Facility and with well pump redesign, Maywood Mutual Water Co. No. 1, City of Huntington Park, CA** – This project was a grant funded project through the California Department of Public Health (CDPH). Mr. Renner coordinated the design review and approval of the project. He created and maintained the Project Budget and Expenditure Summaries. Responsible for managing and facilitating all permitting with the City of Huntington Park and Southern California Edison. Additionally, he prepared the plans, specifications, and estimates for the construction of the grant funded project. The project included the redesign of the on-site well pump assembly and motor to account for the additional head requirements of the proposed treatment equipment, installation of two horizontal 1,500 gpm filtration vessels,

backwash tank, full SCADA system control, sand separator, backup generator and transformer upgrade. Additionally there was 70-foot tall welded steel reservoir replacement which included the removal of a structurally deficient steel reservoir and construction of the proposed welded steel reservoir. The proposed reservoirs included a ring footing with 45-foot deep 3-foot diameter caissons to combat liquefaction issues. The reservoir removal and replacement is located within fifteen feet of an existing 70-foot tall 2 million gallon steel reservoir that was to be protected during construction.

- **I-15 Sewer Lift Station and Water Booster Station, *City of Hesperia*** - Mr. Renner is providing quality assurance and quality control for the I-15 Sewer Lift Station and Water Booster Station project. This project consists of the design and construction of a sewer lift station and water booster station to provide service to developments along the I-15 freeway corridor. Through a phased approach, TKE first developed a sewer and water feasibility study to serve the area; followed by preparing the design and contract documents for sewer conveyance, and water distribution and transmission systems; and is now preparing the design and contract documents for the lift station and booster station. The lift station includes two 25 HP VFD submersible impeller pumps, wet well, piping, valves, manholes, electrical, motor control center and electrical building, and associated site improvements. The separate booster station, located at an existing reservoir site, includes three 250 HP VFD pumps, two 50 HP VFD pumps, one 20 HP pump, hydro-pneumatic system, piping, valves, electrical, prefabricated building, emergency generator (600 kW), and associated site improvements.
- **Regional Water Reclamation Program, *Mission Springs Water District, CA*** – Mr. Renner is providing quality assurance and quality control for the development and construction of the District’s Regional Water Reclamation Program (RWRP). The RWRP includes planning, design, and construction of a regional wastewater treatment plant, interceptor conveyance system, and local wastewater collection systems. Mr. Ledbetter is managing the completion of the RWRP, including: participation and management of funding acquisition; staff, board, consultant, funding agencies, and public coordination and communications; assessment district formation; State Revolving Fund (SRF) and grant application processing; State invoicing and reporting; environmental compliance processing; preliminary engineering preparation; plans, specifications, and cost estimates (PS&E) preparation; bidding and construction; and all related services to successfully complete the RWRP.
- **Jurupa Hills Lift Station Replacement, *Rubidoux Community Services District, City of Jurupa Valley, CA*** – This project consisted of the replacement of an existing 300 gpm lift station, site demolition and abandonments, electrical and backup power tie ins and easement document preparation at the Jurupa Hills Country Club Golf Course. Mr. Renner was in responsible charge of all project activities. This included hydraulic calculations, site layout, specification preparation, survey and electrical sub-consultant coordination, management of assistant engineers and AutoCAD Drafters, and project billings.



KRISTINE MACALMA, E.I.T.

TKE Engineering, Inc.

Project Engineer

EDUCATION

B.S, Civil Engineering, California State Polytechnic University, Pomona

AFFILIATIONS

Inland Empire, Women in Transportation (WTS)
Riverside-San Bernardino Counties Branch, American Society of Civil Engineers (ASCE)

Ms. Macalma is a Project Manager at TKE and has over 5 years of experience in assisting in engineering drafting and design. Her experience includes transportation improvements, street improvements, utility research, grading plans, construction management assistance, grant preparation, preliminary and final design drawings, specifications and engineer's cost estimates, and water and wastewater facilities including pipelines and water storage reservoirs. Ms. Macalma has been an integral part of projects successfully completed for the City of Calimesa, City of Highland, City of Yucaipa, City of Hesperia, City of Adelanto, City of Fontana, City of Upland, and City of Wildomar.

DETAILED PROJECT EXPERIENCE

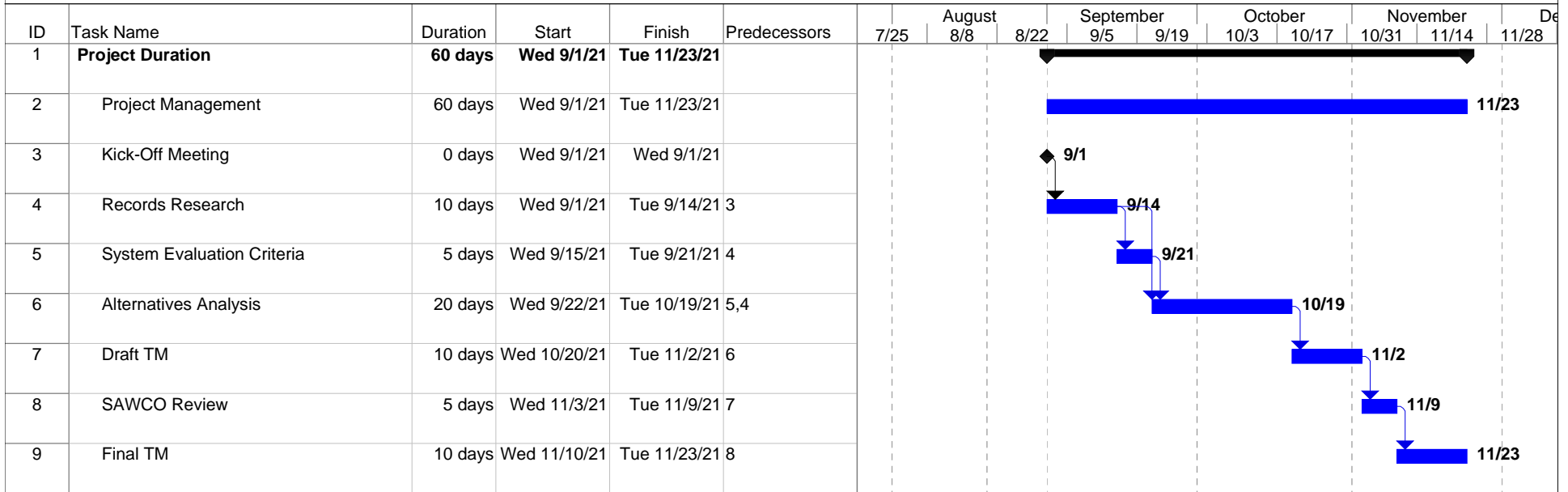
- **Regional Water Reclamation Program, Mission Springs Water District, CA** – Ms. Macalma is providing project engineer services for the development and construction of the District's Regional Water Reclamation Program (RWRP). The RWRP includes planning, design, and construction of a regional wastewater treatment plant, interceptor conveyance system, and local wastewater collection systems. Mr. Ledbetter is managing the completion of the RWRP, including: participation and management of funding acquisition; staff, board, consultant, funding agencies, and public coordination and communications; assessment district formation; State Revolving Fund (SRF) and grant application processing; State invoicing and reporting; environmental compliance processing; preliminary engineering preparation; plans, specifications, and cost estimates (PS&E) preparation; bidding and construction; and all related services to successfully complete the RWRP.
- **I-15 Sewer Lift Station and Water Booster Station, City of Hesperia** - Ms. Macalma is the project engineer for the I-15 Sewer Lift Station and Water Booster Station project. This project consists of the design and construction of a sewer lift station and water booster station to provide service to developments along the I-15 freeway corridor. Through a phased approach, TKE first developed a sewer and water feasibility study to serve the area; followed by preparing the design and contract documents for sewer conveyance, and water distribution and transmission systems; and is now preparing the design and contract documents for the lift station and booster station. The lift station includes two 25 HP VFD submersible impeller pumps, wet well, piping, valves, manholes, electrical, motor control center and electrical building, and associated site improvements. The separate booster station, located at an existing reservoir site, includes three 250 HP VFD pumps, two 50 HP VFD pumps, one 20 HP pump, hydro-pneumatic system, piping, valves, electrical, prefabricated building, emergency generator (600 kW), and associated site improvements.
- **Horton Wastewater Treatment Plant Tertiary Filtration System, Desert Hot Springs, CA** – Ms. Macalma is the project engineer for the preparation of Preliminary Design Report and estimates for the construction of an Title 22 tertiary treatment facility for the District's existing Horton Wastewater Treatment Plant. The report defined the

feasibility and cost effectiveness to alleviate existing and future secondary effluent disposal deficiencies at the Plant. The analysis focused on the installation of tertiary filters to reduce suspended solids prior to land disposal. In addition, the report evaluated the ability to use the proposed tertiary filters along with disinfection facilities to meet Title 22 recycled water standards in the future.

- **San Bernardino Avenue Treatment Plant Sewer Improvement, *City of Fontana, CA*** – Ms. Macalma was the project engineer for the preparation of plans, specifications, and estimates for the construction of the San Bernardino Avenue Treatment Plant Sewer located in the City of Fontana north of Interstate 10 between Commerce Drive and Mulberry Avenue. The project included approximately 1,100 linear feet of 18-inch vitrified clay sewer pipe, including four sewer diversion manholes, a channel crossing and connection to the existing lift station. The facility construction was required to abandon a privatized treatment plant and divert flows to the San Bernardino Avenue Lift Station which conveys flows to IEUA's Regional Plant No. 4. The project included connection to the existing lift station wet well and required the lift station to modify the high-water level. Services included records research, preliminary engineering design, potholing coordination, hydraulic modeling, permitting, coordination with agencies, bidding services, and construction assistance.
- **Sewer Feasibility Study, *Bloomington CA*** - Ms. Macalma was the project engineer overseeing the completion of preliminary engineering analysis and preparation of a feasibility study to develop a wastewater collection system to serve the area on Bloomington, in the County of San Bernardino. The analysis included developing sub-areas, determining collection system alignments, pumping requirements, developing wastewater flowrates, pipe sizing, and cost estimation. The wastewater collection system includes over 57,000 linear feet of truck sewer mains, five (5) lift stations, and over 15,000 linear feet of force mains, at a total cost of over \$105 million.
- **Horton Wastewater Treatment Plant Odor Control, *Desert Hot Springs, CA*** - Ms. Macalma is the project engineer for the preparation of plans, specifications, and estimates for the construction of an odor control system for the District's existing Horton Wastewater Treatment Plant. The proposed vapor phase odor control system will service the influent pump station and headworks facilities. The project will significantly reduce odor emissions to neighboring residential developments. The project includes coordination with the Regional Water Quality Control Board, Air Quality Management District, other agencies, vendors, and consultants. Services include records research, coordination with agencies, vendors, and consultants, design, cost estimating, technical and benefit cost analysis, regulatory agency coordination, permitting, bidding, construction management, construction staking, and inspection.



San Antonio Water Company Budgetary Study of a 1.0 MGD Treatment System Project Schedule



Project: Project Schedule_08-20-2021 Date: Fri 8/20/21	Task		Inactive Milestone		Finish-only	
	Split		Inactive Summary		External Tasks	
	Milestone		Manual Task		External Milestone	
	Summary		Duration-only		Progress	
	Project Summary		Manual Summary Rollup		Deadline	
	External Tasks		Manual Summary			
	External Milestone		Start-only			

San Antonio Water Company
 Budgetary Study of a 1.0 MGD Treatment System
 Fee Schedule Breakdown

Task No.	Task	Principal In-Charge		Project Manager		Project Engineer		Assistant Engineer/Designer		Clerical		Subconsultants	Total
		Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$		
1.	Project Management	4	\$ 700	12	\$ 1,980	8	\$ 1,240	4	\$ 540	12	\$ 1,020		\$ 3,500
2.	Data Gathering and System Evaluation Criteria	2	\$ 350	8	\$ 1,320	16	\$ 2,480	16	\$ 2,160	8	\$ 680		\$ 5,670
3.	Technical Memorandum	8	\$ 1,400	16	\$ 2,640	48	\$ 7,440	32	\$ 4,320	12	\$ 1,020		\$ 14,180
Subtotal:		14	\$ 2,450	36	\$ 5,940	72	\$ 11,160	52	\$ 7,020	32	\$ 2,720		\$ 23,350
												Reimbursables (@5%)^{1.)}:	\$ 1,168
												Total:	\$ 24,518
												Rounded Total:	\$ 24,500

Rates:

Principal In-Charge	\$ 175 /HR
Project Manager	\$ 165 /HR
Project Engineer	\$ 155 /HR
Assistant Engineer/Designer	\$ 135 /HR
Clerical	\$ 85 /HR

Notes:

1.) Reimbursables Include Cost for Prints, Copies, Mileage, Etc.





RATE SCHEDULE

2021- 2022

	<u>HOURLY RATE</u>
Principal in Charge	\$175.00
Project Manager/Construction Manager/Licensed Surveyor	\$165.00
Senior Engineer/Project Engineer (PE)/Senior Plan Checker.....	\$155.00
Associate Engineer	\$145.00
Assistant Engineer/Plan Checker/Designer	\$135.00
AutoCAD Technician.....	\$125.00
Engineering Technician.....	\$ 90.00
Clerical	\$ 85.00
Forensic Engineering	\$250.00
Expert Witness Testimony	\$350.00
 <u>SURVEYING SERVICES</u>	
2-Man Survey Crew (Prevailing Wage).....	\$240.00
 <u>CONSTRUCTION SERVICES</u>	
Senior Construction Inspector (Prevailing Wage)	\$120.00
Construction Inspector (Prevailing Wage)	\$110.00
 <u>REIMBURSABLE COSTS</u>	
In-house Reproduction	Cost
Printing and Materials	Cost + 10%
Express Mail/Courier/Next Day Service ..	Cost + 10%
Special Subconsultant Services ..	Cost + 10%